



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
TOWNSHIP BOARD – REGULAR MEETING
December 5, 2023 6:00 PM

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE/INTRODUCTIONS
3. ROLL CALL
4. PRESENTATION
 - A. Recognition-Gayelord Mankowski, Santa's First Responders
5. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS
6. TOWNSHIP MANAGER REPORT
7. BOARD MEMBER REPORTS OF ACTIVITIES AND ANNOUNCEMENTS
8. APPROVAL OF AGENDA
9. CONSENT AGENDA
 - A. Communications
 - B. Minutes-November 21, 2023 Regular Township Board Meeting
 - C. Bills
 - D. Ratification of New Paramedic/Firefighter Appointments
 - E. Ratification of New Police Officer Appointments
 - F. M.A.C. Legends Indoor Golf LLC 1982 W Grand River Liquor License Application Suite 80310
 - G. Township's Annual Goal Setting Meeting
10. QUESTIONS FOR THE ATTORNEY
11. HEARINGS
12. ACTION ITEMS
 - A. Ordinance 2023-07-Fire Protection and Emergency Services Cost Recovery Ordinance Update-Final Adoption
 - B. Ordinance 2023-06 – Rezone 5010 Park Lake Road and Adjacent Vacant Property – RA to RD, with a Conditional Rezoning Agreement
 - C. Ordinance 2023-08 – CV, Conservancy District Updates-Introduction
 - D. Paid Parental Leave Policy
 - E. Marshall Park Playground Enhancements
13. BOARD DISCUSSION ITEMS
 - A. Meridian Township Public Safety Recruitment and Retention Program
 - B. Memorandum of Understanding-Okemos Public Schools
 - C. Letter of Agreement with the Department of Public Works and Parks and Recreation TPOAM Union
14. COMMENTS FROM THE PUBLIC
15. OTHER MATTERS AND BOARD MEMBER COMMENTS
16. ADJOURNMENT

All comments limited to 3 minutes, unless prior approval for additional time for good cause is obtained from the Supervisor. Appointment of Supervisor Pro Tem and/ or Temporary Clerk if necessary. Individuals with disabilities requiring auxiliary aids or services should contact the Meridian Township Board by contacting: Township Manager Frank L. Walsh, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4258 - Ten Day Notice is Required.

Meeting Location: 5151 Marsh Road, Okemos, MI 48864 Township Hall
Providing a safe and welcoming, sustainable, prime community.



9.A

**CONSENT AGENDA
BOARD
COMMUNICATIONS**



CHARTER TOWNSHIP OF MERIDIAN, INGHAM COUNTY

LEGAL AD NOTICE: Rezoning #23036

MONDAY, December 11, 2023

**CHARTER TOWNSHIP OF MERIDIAN
LEGAL NOTICE
Rezoning #23036 (5681 Shaw)
Public Hearing**

Notice is hereby given that the Planning Commission of the Charter Township of Meridian will hold a public hearing on Monday, December 11, 2023 at 6:30 p.m. in the Meridian Municipal Building, Town Hall Room, 5151 Marsh Road, Okemos, MI, 48864 (phone 517-853-4560) to hear all persons interested in a rezoning request initiated by the Township. The applicant, Lilliac LLC, is requesting to rezone an approximately 0.4-acre parcel located at 5681 Shaw Street from PO (Professional and Office) to RC (Multiple-Family Residential).

Information may be examined at the Department of Community Planning and Development, 5151 Marsh Road, Okemos, Michigan 48864-1198, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday and on the Township website under Planning & Development Documents at <https://www.meridian.mi.us/about-us/departments/community-planning-development>.

Written comments may be sent prior to the public hearing to the Planning Commission, Charter Township of Meridian, 5151 Marsh Road, Okemos, Michigan, 48864, or by email to planningcommission@meridian.mi.us, or at the public hearing.

Publish:

**City Pulse
November 22, 2023**

**Deborah Guthrie
Township Clerk**

1 Affidavit, please



CHARTER TOWNSHIP OF MERIDIAN, INGHAM COUNTY

LEGAL AD NOTICE: Planned Unit Development #23038

(The Greens)

Thursday, December 14, 2023

CHARTER TOWNSHIP OF MERIDIAN
LEGAL NOTICE
Planned Unit Development #23038 (The Greens)
Public Hearing

Notice is hereby given that the Director of Community Development and Planning of the Charter Township of Meridian will hold a public hearing on Thursday, December 14, 2023 at 2:00 p.m. in the Town Hall Room, located at 5151 Marsh Road, Okemos, to hear all persons interested in a Planned Unit Development (PUD) minor amendment request from ACD II, Inc. The request is for a minor amendment to the Greens at Walnut Hills planned unit development (PUD #86014) to combine lots 86 and 87. The subject site is zoned RAA (Single Family-Low Density).

Information may be examined at the Department of Community Planning and Development, 5151 Marsh Road, Okemos, Michigan 48864-1198 (phone 517-853-4560), between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Written comments may be sent prior to the public hearing to Keith Chapman, Assistant Planner, Charter Township of Meridian, 5151 Marsh Road, Okemos, Michigan, 48864, or by email to chapman@meridian.mi.us.

Publish: City Pulse
November 29, 2023

Deborah Guthrie
Township Clerk

1 Affidavit, please

From: [Scott Hendrickson](#)
To: [Jesse Knapp](#)
Cc: [Board](#)
Subject: Re: Township listening session
Date: Tuesday, November 28, 2023 9:58:12 PM

Good Evening Jesse,

Thank you for you email and for attending the listening session this evening. I'm glad that you found it useful and hope that you got some good information.

I completely understand your frustration with respect to the economic development of our Downtown Okemos area. I think the reason it may seem like we glossed over it was because we are relatively limited in what we can do, moving forward. The property is privately owned, and the developer is a third party whose financial limitations are what they are based on their business model.

For our part we have tried to streamline the process as much as possible (they were approved in 2019, extended and amended several times since and we have thus-far waived the expiration of their special use permit). The Township created the Downtown Development Authority to allow for tax increment incentives to be reinvested into that property (and others as they redevelop). We have set aside money in the Meridian Redevelopment Fund, we supported and, in some cases, helped to write their grant applications to several major funding grants from the State and Federal Government. We begged the Michigan Department of Environment, Great Lakes and Energy not to pull their environmental remediation funding as a result of the developer's continual delays. This is absolutely an eyesore, and one that I also drive by it every day. I don't speak for the Board as a whole, but I think if you polled each of us, you'd likely find that successful redevelopment of Downtown Okemos and revitalization of our commercial center is at the very top of everyone's priority list.

With all of that said, we are not the property owner, and we are not the developer. At a certain point this developer is going to have to decide whether to move forward or not. The only stick that we have is to withhold what money we have said is available when they do move forward or strip them of their permit and force them to start over from scratch, which would only add further delays and cost to the project.

I think the fundamental misconception is that the Township does NOT develop businesses. We can make the process as easy as possible for businesses to operate and we can bring limited financial incentives to bear to assist, as you've seen above. At the end of the day, private business still has to choose to operate here.

I think what you're seeing is a regional and national trend away from commercial retail and the restaurant industry, which has always existed on the edge of a knife. These are not unique to Meridian.

But it isn't all doom and gloom. If you and your wife are looking for a date night here in Meridian, there are plenty of new and established restaurants to try! Tantay Peruvian Cuisine is a food truck-turned brick and mortar down on Jolly Rd. Joe's on Jolly is thriving as well. Red Haven Farm to Table changed its model but is doing pop up dinners and they have been very well received. Buddy's Pizza is quite good. Keiyo Sushi is new where Maru used to be on Central Park. Yello Waffles, Nothing Bundt Cakes, and Crumbl Cookies are newly opened if you're looking for dessert. Most of these restaurants opened in the last 18 months.

Redevelopment takes time, and no one wants vacant buildings. I think it is very easy to see the vacant parcels and ignore the new business that is popping up right here in town. Speaking of popping, try Jackson Popping Company in the Mall, it's delightful in there!

It's true that I wasn't in Meridian Township in the 80s or 90s. But I'm here now and I am planning on raising my family here over the next few decades. I'm invested in the future of this community and will be working hard on the Board to ensure that it's a future that we can all be proud of and excited by.

Please do not hesitate to reach out if I may ever be of service.

Sincerely,

Scott Hendrickson
Meridian Township Trustee

From: Jesse Knapp <[REDACTED]>
Sent: Tuesday, November 28, 2023 9:12 PM
To: Board <Board@meridian.mi.us>
Subject: Township listening session

Thank you for taking the time this evening (11/28/23) to listen to the citizens of Meridian Township. Making yourselves available and visible to the community that you serve goes a long way to building trust and getting more people involved in being heard.

I was disappointed that the development of the economy in Meridian Township was not discussed more. We have great parks, we have ok neighborhoods, the next item on the master plan is economic development. Where is that? I understand that the

Downtown Okemos area has been through a lot, but it was brushed off as the Board is working hard to get it developed. It has been several years. And is just a parking lot at best at the moment. It is an eyesore that everyone that travels to Okemos has to drive by. How that isn't the #1 priority of the board is beyond me.

There are several other properties in the township that have been vacant for quite some time. I am not saying that the township has to develop businesses everywhere and there can't be vacant buildings. What I am saying is that the Okemos area is not attracting people or businesses. And it shows when businesses stay vacant for years. The Meridian Mall is mostly deserted. The old Hydroponics store on Okemos has sat unused for years. The Outback steakhouse building hasn't been used since closing during COVID. No One has moved into the old Verizon store next to Old Chicago. It puts Okemos in a bad light that there is all this vacant business buildings. And that spirals when no action is taken to right the ship.

My wife and I went on a date, and went up to Eastwood Towncenter to eat, because there is variety up there. And when we were done eating we went home. Because there was no where in Okemos that was open past 8:30pm that wasn't a loud restaurant/bar. There is no where to gather or go hang out in Okemos.

It feels like people live in Okemos and go elsewhere for work and enjoyment. That wasn't the case when I was growing up. In the 80s and 90s Okemos was the nice place to go. There were places to eat. The mall was a fun place to hang out and shop.

Concerned citizen of Meridian Township Jesse Knapp



RECEIVED

NOV 29 2023

Meridian Township
Clerk's Office

November 6, 2023

Dear Williamston City Council Members and Williamstown Township Trustees,

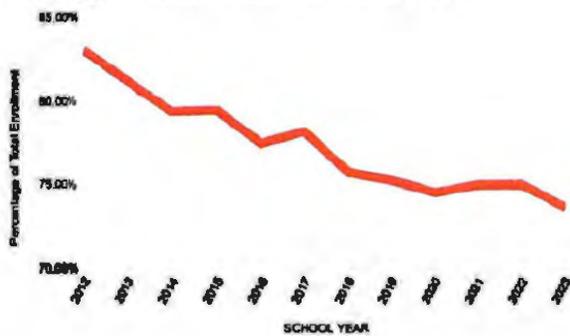
We, the Williamston Community Schools Board of Education, are writing to convey the urgent need for additional housing inventory in Williamston. As you are aware, representatives of Williamston Community Schools (WCS) have advocated for many years to add homes. As outlined in those presentations and discussions, data strongly support the need for immediate attention to the housing requirements of our community.

Despite the conclusiveness of data, no noticeable progress has been made, even as the communities around us continue to strategically add inventory. We have also observed that despite the hardships created by our housing shortage, exploring solutions to address the situation is not a priority. It is incumbent that both the City of Williamston and Williamstown Township take immediate steps to create the conditions for a sustainable population for the community and a consistent student enrollment base for the school district.

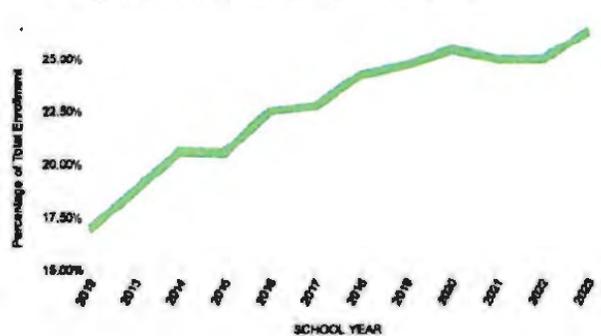
Williamston Community Schools faced an enrollment and fiscal crisis from approximately 2010 - 2016. The factors impacting that crisis included Michigan's unique economic challenges and the national recession. State funding cuts and families moving out of the area to seek employment resulted in dire financial circumstances for the District. To recover, WCS aggressively marketed the strong academic attributes and co-curricular programs synonymous with the District's long-standing record of excellence.

Marketing the District was and continues to be, a success. An influx of students have enrolled seeking enhanced educational opportunities. In fact, in 2019 WCS recorded its largest student enrollment since 2007. A part of the marketing plan, which was communicated to the City and the Township, was the anticipation that both entities would add housing inventory so District enrollment would become consistent and sustainable. Unfortunately, the City and Township have not expanded housing options or availability. Williamston Community Schools is now reliant on unpredictable School of Choice (SOC) and Non-Resident enrollment to maintain our quality academic and co-curricular programs.

Percentage of Resident Students Enrolled at WCS



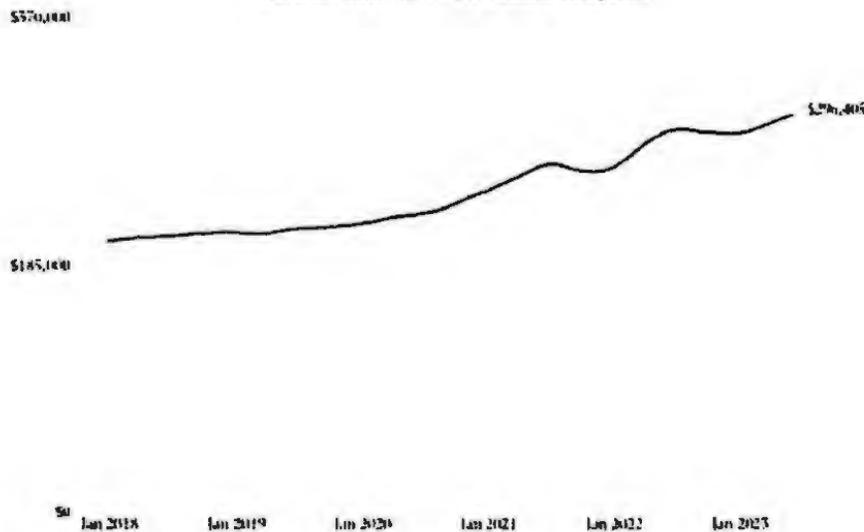
Percentage of SOC/NR Students Enrolled at WCS



Citation: Audited District Fall Student Count Numbers, 2012-2023

The combination of a highly rated, desirable school district and a decade of inaction on housing construction has resulted in skyrocketing home prices. According to data published by Zillow in July 2023, Williamston ranks 41st in Michigan for the highest housing price increase over the past five years. The consequence of a 43.7% increase during this period is a price of \$296,405 for a typical home. It is virtually unobtainable for most young families and working professionals to purchase a house in Williamston.

Home Values in Williamston, MI



Source: Zillow. Data represents monthly typical home value

Citation: https://www.iosconews.com/news/state/image_9306a2e4-e700-53a3-9a7a-bf76546cb581.html

The District not only loses students but also exceptional teaching candidates. Even with record salary increases over the past several school years, many educators cannot afford to reside in or commute to Williamston. As of November 2022, only 39% of the professional staff working for WCS resided in the District. Furthermore, many children of faculty who live outside the District cannot attend WCS. The costs and logistical challenges of commuting make it impossible for their attendance. Given the highly competitive nature of the current educational job market, the

lack of housing has a profound negative impact on the District's ability to recruit and retain outstanding educators.

School of Choice and Non-Resident enrollment create the impression that the District (and in turn, the community as a whole) has a strong economic foundation. It does not. The residential population of the school district is in steep decline. It is imperative that our local governments take immediate action.

This is not a debate over rampant pro-growth versus maintaining a rural environment. It is about providing the resources necessary to sustain current expectations and quality of life in Williamston. Remedy the housing shortage.

The Williamston Community Schools Board of Education respectfully requests housing become the foremost priority of the City and the Township, and that the necessary proactive steps be taken to solve this serious immediate and long-term issue.

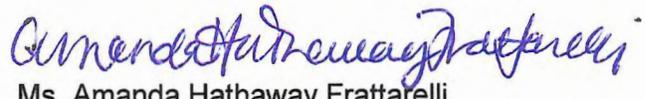
The Board is eager and willing to problem-solve and collaborate with the City, Township, and community members. We must find mutually agreeable housing solutions to ensure the ongoing success of our school district and the entire Williamston community.

Sincerely,

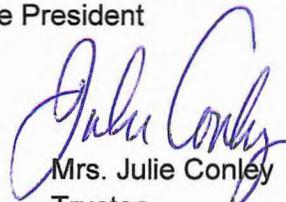
The Williamston Community Schools Board of Education

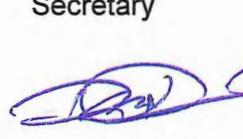

Mrs. Nancy Deal
President

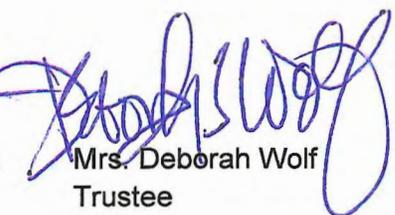

Mrs. Sarah Belanger
Vice President


Ms. Amanda Hathaway Frattarelli
Secretary


Dr. Christopher Lewis
Treasurer


Mrs. Julie Conley
Trustee


Mr. David Indish
Trustee


Mrs. Deborah Wolf
Trustee

CC:

Alaiedon Township
Leroy Township
Locke Township
Meridian Township
Wheatfield Township



November 30, 2023

To the Members of the Township Board of Trustees:

RE: Rezoning of 36 acres Vacant Land at 5010 Park Lake Rd and vacant contiguous parcels

On behalf of the property owners Salim, Sam and Charles Makhoul ("Makhoul Brothers"), who own the subject property. For over 30 years, they have paid the real estate taxes, drain and any other assessments made to the property. They purchased it with the legal land use rights to occupy and develop the property with entitlements allowed for multi-family and single family residential.

During the discussion about the property during the Twp Board Meeting on November 21, 2021 few of the Trustees made reference that they would not be supporting the proposed rezoning for 7 of the 36 acre property because they felt it was not in keeping with the master plan, and that a potential multi-family development wasn't an appropriate use of the site. The owners feel strongly that it is an appropriate use of the site. They bought the property to develop multiple family and single family on the site. the conditional rezoning will provide Redwood the opportunity to develop low density, multiple family development that is unlike anything in the Township.

It was also brought up that split zoned parcels are difficult to address. As stated in the Meridian Twp Master plan update of 2022 that the Twp's goal is to eliminate split zoned parcels. Our proposal to offer a conditional rezoning of the parcel effectively does just that, it puts conditions on the property that severely limit the future development of the whole 36 acre site not to allow more than 106 total units which is 2.94 units per acre, less than maximum allowable 3.5 units per acre as proposed under R2 zoning which is identified for future zoning under the Township's future land use map for this parcel.

Presently the owners legal land use rights for the property with its allocation of land zoned RA and RD allows them to develop up to 185 units on the property. Even if 100% of property were zoned all RA the legal allowable number of dwelling units would be 126. Again, for this proposal Redwood will conditionally limit the future development to a limit of 106 units.

Conditionally rezoning 7 of the 36 acres as Redwood has proposed also **meets several other goals and objectives as sited in the Meridian Township Master Plan of 2022** they are:



- **“Make progress for more housing diversity and affordability”** and **“strengthen and expand residential opportunities”** the product being proposed by Redwood is nothing like anything currently in the township, in fact its most like a townhouse or condominium development except the housing option is for rent which meets the needs of both the young workforce and seniors/empty nesters and snowbirds that want to downsize their footprint not have responsibility for maintenance/upkeep and live in a professionally managed community.
- **“Build Strategic Growth and promote Environmental Preservation within the Urban Service Boundary”** Redwood’s engineering studies suggest the proposed development will provide environmental preservation by reducing water runoff from the site by close to 80%, their conditional zoning request will preserve 14 acres from ever being developed and it also meets the goal to “promotes Expanding Opportunities for cluster developments which again lessen environmental impact of development since their development proposes leaving approximately 48% of the land area as undeveloped and will lessen the impact to the environment.
- **“Promote infill development along main vehicular corridors in the Township”** redevelop land previously or partially developed where possible. Again, this development is situated along Grand River Ave (on a Bus CATA bus line) and along Park Lake Rd both are main vehicular corridors. Prior uses of this site include residential, commercial, and agricultural uses.
- **“Incorporate low-impact design standards into the zoning and developments where possible”** the Redwood project meets this objective being a single story, low-density, multiple-family residential neighborhood that again will reduce run-off and drain impact over its present state being undeveloped. Use of smaller private roads within the development will also reduce the impervious road surface area.
- Per the Master Plan **Multiple Family zoning category is best suited when it provides housing of varying intensity between “high intensity commercial” and “lower intensity residential”** This parcel has existing commercial property uses of office and retail to the south and west of the parcel and to the east CSX railroad with adjacent multiple family use, to the north and northwest of this site is single-family residential use.
- **Amend Zoning ordinance to allow an increase of “Missing Middle”** housing options such as duplex housing. Redwood’s product provides an option for the missing middle from a cost standpoint today with increasing construction and mortgage cost these housing units will be approximately 1,300 square feet which clearly it fits into the “Missing Middle” size and occupancy cost range.

The property owners feel like the conditional rezoning allows both the Township to limit the density of the development and for them to reach their goal to allow development of the property for what they intended to do when they purchased the property.

We have been searching together for over the past 10 years of searching for developer to build a quiet yet vibrant new housing community to Meridian Township residents that is sensibly sized, environmentally sensitive multiple housing development unlike anything else available. Redwood is willing to limit development with the conditional zoning request to a significantly lower density than what is it already zoned to accommodate. They are a developer known delivering what they promise with an excellent track record for developing,

Shawn O'Brien, CCIM
Vice President | Lansing
Retail & Land Advisor

2501 Coolidge Rd.
Ste. 300
East Lansing, MI 48823

Main: +1 517 662 3535
Direct: +1 517 662 3529
Mobile: +1 517 303 5554
shawn.obrien@colliers.com



maintaining high-quality developments they plan to own, manage and operate for many years to come.

We appreciate your time and effort to understand this project and contemplate how it will benefit and yet impact the Meridian Township community. We hope after careful consideration of how this conditional rezoning request meets many of the goals and objectives of the 2022 Meridian Township Masterplan and that you will support of this conditional rezoning request.

Sincerely,

A handwritten signature in blue ink that reads "Shawn O'Brien".

Shawn O'Brien, CCIM
Vice President | Lansing



**CONSENT AGENDA
PROPOSED BOARD MINUTES**

PROPOSED MOTION:

- (1) Move to approve and ratify the minutes of the Regular Meeting of November 21, 2023 as submitted. (1)**

ALTERNATE MOTION:

- (1) Move to approve and ratify the minutes of the Regular Meeting of November 21, 2023 with the following amendment(s):[insert amendments]**

CHARTER TOWNSHIP OF MERIDIAN
REGULAR MEETING TOWNSHIP BOARD 2023 -DRAFT-
5151 Marsh Road, Okemos MI 48864-1198
517.853.4000, Township Hall Room
TUESDAY, November 21, 2023, 6:00 pm

PRESENT: Supervisor Jackson, Treasurer Deschaine, Trustees Hendrickson, Sundland, Wilson and Wisinski

ABSENT: Clerk Guthrie

STAFF: Township Manager Walsh, Director Clark, Director Schmitt, Director Gebes, Chief Grillo, Chief Hamel, Manager Diehl, Deputy Clerk Gordon

1. CALL MEETING TO ORDER
Supervisor Jackson called the November 21, 2023, Regular Township Board meeting to order at 6:01 pm.
2. PLEDGE OF ALLEGIANCE/INTRODUCTIONS
Supervisor Jackson led the Pledge of Allegiance.
3. ROLL CALL
Deputy Clerk Gordon called the roll of the Board. 6 board members present at 6:00 pm. Clerk Guthrie absent.
4. PRESENTATION: NONE
5. CITIZENS ADDRESS AGENDA ITEMS AND NON-AGENDA ITEMS
Supervisor Jackson opened comments from the public at 6:02 pm
Shawn O'Brien spoke on behalf of the applicants regarding the Rezoning for Park Lake Road
Vincent Leone spoke in opposition of the rezoning on Park Lake Road
Supervisor Jackson closed comments from the public at 6:09 pm
6. TOWNSHIP MANAGER REPORT
Manager Walsh gave updates on the following items:
 - December 8th is the ribbon cutting for MSU pathway for Phase 1 of the bridge project.
 - Directors are preparing goals and objectives for December 8th.
 - Crumble Cookies is opening by the UPS store.
 - The final listening session is November 28th at Cornell Elementary.
 - Police Neighborhood meeting is November 30th.
 - Working on the dormitory issues on Fire Station 1.
 - Deer management is at 103 and is on hiatus until December 1st.
 - The Public Safety Recruitment program will be on December 5th agenda for discussion.
 - Good Morning Meridian came out on November 21st.

- The flooring project at the police station has begun.
- Ladder truck has returned to the Fire Station
- Master Plan update will be coming to the Board.
- Knob Hill has turned in a building permit for a new building.
- The Mteam will have evaluations next month.
- The New Parks and Recreation Director has been selected.
- School Pedestrian Safety project.
- Fourth Quarter budget amendments will be back on agenda.

7. BOARD MEMBER REPORTS OF ACTIVITIES AND ANNOUNCEMENTS

Trustee Wilson met with School Pedestrian Safety and gave updates on the progress thus far.

Treasurer Deschaine attended the listening session and would like to have listening sessions next year. Attended the CATA meeting last week on the 15th for the TIF with Director Clark. Tax bills are going out next week, should arrive on December 1st.

8. APPROVAL OF AGENDA

Trustee Wilson moved to approve the agenda as presented. Seconded by Trustee Wisinski

VOICE VOTE: YEAS: Supervisor Jackson, Treasurer Deschaine, Trustees Hendrickson, Sundland, and Wilson

NAYS: 0

Motion carried: 6-0

9. CONSENT AGENDA

Supervisor Jackson reviewed the Consent Agenda

Treasurer Deschaine moved to approve the agenda as presented. Seconded by Trustee Hendrickson

ROLL CALL VOTE YEAS: Treasurer Deschaine, Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson

NAYS: 0

Motion carried: 6-0

10. QUESTIONS FOR THE ATTORNEY

NONE

11. HEARINGS

12. ACTION ITEMS

A. Recreational Marihuana Licensing Standards

Director Schmitt spoke about the process of reviewing the licenses of recreational marijuana and the proposed review board for new applicants. Township Legal Counsel Kuschel spoke about who would be on the Review Committee, and what would be required for the committee meetings. Trustee Hendrickson suggested making the Review Committee 5 or 7 instead of 6, to ensure less ties. Supervisor Jackson asked clarifying questions about the responsibility of the Review Committee. Trustee Wilson spoke in support of a smaller body without a Planning Commissioner. Treasurer Deschaine asked Director Schmitt about staff time and independent consultants. Trustee Wisinski spoke in favor of a smaller committee leaving off Board Members. Trustee Hendrickson and Trustee Wilson spoke about having the applications reviewed by staff.

Treasurer Deschaine made a motion to strike section 1 and 2 of section B - Supported by Trustee Hendrickson

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson asked clarifying questions about the staff process of districts with more applicants vs. districts with less documents. Trustee Hendrickson asked what the appeal process would be. Trustee Hendrickson asked what the date would be for the applications to open.

Trustee Hendrickson moved to adopt the Procedures and Standards for Accepting Applications and the Competitive Review Process Under Chapter 40 Authorizing Adult-Use Marihuana Establishments as amended. Supported by Trustee Wisinski

Trustee Hendrickson and Wisinski spoke about the work that was done to get us to this point. Treasurer Deschaine asked questions regarding the review factors.

ROLL CALL VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Trustee Hendrickson moved that the Board set an initial application window under the procedures and standards for accepting applications in competitive review process window opening January 9, 2024 and closing January 23, 2024. Seconded by Trustee Wilson

Trustee Hendrickson spoke about his motion. Trustee Wilson suggested that it should be deferred due to the Holidays. Director Schmitt recommended ending it on the 26th and that the Board specify the date and time.

Trustee Wilson moved to amend the motion and that the period for the acceptance of applications would commence on Tuesday, January 9, 2024, and end at 5:00 pm on January 26, 2024, and that all applications will be submitted through the Clerk's office. supported by Treasurer Deschaine.

VOICE VOTE

YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine

NAYS: 0

Motion carried: 6-0

On original motion

VOICE VOTE

YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine

NAYS: 0

Motion carried: 6-0

B. Ordinance 2023-07 - Fire Protection and Emergency Services Cost Recovery Update-Introduction

Chief Hamel reviewed the changes to the Ordinance. Treasurer Deschaine and Trustee Hendrickson asked clarifying questions about the background. Board members spoke in support of the ordinance.

Trustee Hendrickson moved to approve the updated Cost Recovery Ordinance amending chapter 18 of the code of the Charter Township of Meridian to include the addition of Article III "Fire Protection and Emergency Services" and authorize the clerk and supervisor to sign the ordinance with the following change: in section 18-32 subsection B striking the word "house" and the following comma. Supported by Trustee Wilson.

ROLL CALL VOTE

YEAS: Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine, Trustee Hendrickson

NAYS: 0

Motion carried: 6-0

C. Community/Senior Center Request for Proposals

Trustee Wilson spoke about the process task force and the company who was chosen for the RFP. Treasurer Deschaine and Trustee Hendrickson spoke about the reason for the RFP.

Trustee Wilson moved to approve the recommendation of the community/senior center task force to engage Progressive AE to provide community outreach, planning and design work for the potential new meridian township community/senior center. Supported by Treasurer Deschaine.

ROLL CALL VOTE YEAS: Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine, Trustee Hendrickson, Trustee Sundland

NAYS: 0

Motion carried: 6-0

D. Board and Commission Reappointments

Supervisor Jackson moved to reappoint Leslie Charles to the Communications Commission for a 3 Year Term ending 12/31/2026. Supported by Treasurer Deschaine

VOICE VOTE YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved to Reappoint Kathleen Langhals to The Community Resources Commission For A 2 Year Term Ending 12/31/2025. Move To Reappoint Bradley Brogren to The East Lansing Meridian Water & Sewer Authority For A 2 Year Term Ending 12/31/2026. Supported by Trustee Wilson.

Trustee Wilson spoke in favor of Kathleen Langhals.

VOICE VOTE YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved to reappoint Bradley Brogren to the East Lansing Meridian Water & Sewer Authority for a 3-year term ending 12/31/2026. Seconded by Treasurer Deschaine.

Treasurer Deschaine spoke in support of Bradley Brogan to East Lansing Meridian Water and Sewer Authority

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Reappoint Kimberly Thompson to The Economic Development Corporation for A 6 Year Term Ending 12/31/2029. Supported by Trustee Sundland.

Trustee Sundland spoke in support of Kimberly Thompson

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Reappoint John Sarver to The Environmental Commission for A 3 Year Term Ending 12/31/2026. Supported by Trustee Wisinski.

Trustee Wisinski spoke in support of John Sarver

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Reappoint Steve Thomas, Yu Man Lee, Jamie Hiller, And Kathleen Fay to The Land Preservation Advisory Board For A 4 Year Term Ending 12/31/2027. Supported Trustee Wisinski.

Trustee Wisinski spoke in support of Steve Thomas, Yu Man Lee, Jamie Hiller, and Kathleen Fay. Treasurer Deschaine spoke about the importance of land stewardship.

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Reappoint Joyce Van Coevering To The Local Official Compensation Commission For A 2 Year Term Ending 12/31/2025. Supported by Trustee Hendrickson

Trustee Hendrickson spoke in support of Joyce Van Coevering.

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Reappoint Tanya Pratt And Joyce Van Coevering To The Pension Board For A 3 Year Term Ending 12/31/2026. Supported by Treasurer Deschaine

Treasurer Deschaine spoke about the importance of the Pension Board

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

Supervisor Jackson moved To Confirm the Supervisory's Reappointment Of Peter Trezise, Brandon Brooks, William Mcconnell And Christina Snyder To The Planning Commission For A 3 Year Term Ending 12/31/2026. Supported by Trustee Hendrickson.

Trustee Hendrickson spoke in favor of the reappointed commissioners.

VOICE VOTE **YEAS: Trustee Hendrickson, Trustee Sundland, Trustee Wilson, Trustee Wisinski, Supervisor Jackson, Treasurer Deschaine**

NAYS: 0

Motion carried: 6-0

E. Resolution in Support of Small Business Saturday

Trustee Wilson spoke about rental units. Director Schmitt will bring this back at the next meeting with options.

B. Paid Parental Leave Policy

Manager Walsh introduced the policy and spoke on changes to the policy thus far. Trustee Hendrickson provided information about scaling back the program to six weeks as a year-long pilot program. Trustee Wilson, Treasurer Deschaine and Supervisor Jackson spoke in favor of the policy for a four-week pilot due to the staffing levels of the police department. Trustee Wisinski and Supervisor Jackson spoke in favor of a pilot program. Trustee Sundland asked for clarification as to what the current policy is.

Manager Walsh will be bringing this back for approval at the December 5, 2023, meeting

C. Marshall Park Playground Enhancements

Manager Walsh updated spoke about the updates to the park and the support from the Park Commission. Board Members Deschaine, Trustees Hendrickson, Wisinski and Wilson spoke in support of accelerating the project on this park to have it done in 2024 and the benefit of updating the park.

D. Memorandum of Understanding-Okemos Public Schools

Manager Walsh requested that this item be brought back to a discussion on December 5, 2023, when Director Maisner is present. Trustee Hendrickson asked questions about the proposed fee schedule.

E. Ordinance 2023-08 – CV, Conservancy District Updates

Director Schmitt spoke about the Ordinance and the items that would be changed. Trustee Hendrickson asked about the location of the district. Supervisor Jackson asked when the FEMA maps were last updated.

14. COMMENTS FROM THE PUBLIC

Supervisor Jackson opened comments from the public at 9:02 pm

Dr. Joshua Nahum spoke regarding social workers in the Police Department and the conditional rezoning for 2110 Park Lake Road.

Vincent Loene spoke regarding the presentation on 2110 Park Lake Road.

Supervisor Jackson closed comments from the public at 9:06 pm

15. OTHER MATTERS AND BOARD MEMBER COMMENTS

16. ADJOURNMENT

Trustee Wilson moved to adjourn. Seconded by Treasurer Deschaine

**VOICE VOTE: YEAS: Supervisor Jackson, Trustee Deschaine, Trustee Hendrickson,
Trustee Sundland, Trustee Wilson, Trustee Wisinski**

NAYS: 0

Motion carried: 6-0

The meeting adjourned at 9:06 pm.

Patricia Jackson
Township Supervisor

Deborah Guthrie
Township Clerk



To: Board Members
From: Dante Ianni, Finance Director
Date: December 5, 2023
Re: Township Invoices/Expenses

**Charter Township of Meridian
Board Meeting
12/5/2023**

**MOVED THAT THE TOWNSHIP BOARD APPROVE THE TOWNSHIP
INVOICES/EXPENSES AS FOLLOWS:**

COMMON CASH	\$	171,135.25
PUBLIC WORKS	\$	34,689.81
TRUST & AGENCY	\$	14,476.70
	TOTAL CHECKS:	\$ 220,301.76
CREDIT CARD TRANSACTIONS		
11/17/2023 to 11/29/2023	\$	12,263.80
	TOTAL PURCHASES:	<u>\$ 232,565.56</u>
ACH PAYMENTS	\$	<u>1,045,462.31</u>

Vendor Name	Description	Amount	Check #
1. A T & T	2100 GAYLORD - FIBER INTERNET 327950862	195.24	110898
2. ABUNDANCE CAFE LLC	FARM MARKET VENDOR	33.00	
3. ADAM SLAVICK	REIMB CSI TRAINING EXPENSES	330.46	
4. ADAM STACKPOLE	FARMERS MARKET VENDOR	45.00	
5. AIS CONSTRUCTION EQUIPMENT	MOTOR POOL - WATER - BACKHOE REPAIRS	190.72	
6. ALEX & ALLISON REPP	FARMERS MARKET VENDOR	22.00	
7. AMERICAN SECURITY CABINETS, LLC	INDOOR DROP BOX	1,703.00	
8. APPLE	ORDER #AAA1008261 - 16 INCH MACBOOK PRO LAPTOP	3,518.00	
9. ASAP PRINTING	BUSINESS CARDS-COURTNEY WISINSKI	42.23	
10. AT & T	NOV 7 - DEC 6 2023 - PRI TEL + 100 MB INT 831-001-	1,228.93	110891
	OCT 11 - NOV 10 2023 - ASE NET - THB - FS91 - 831.	3,765.38	110891
	TOTAL	4,994.31	
11. AUTO VALUE OF EAST LANSING	UNIT #5 - FLEET REPAIR PARTS	51.98	
	UNIT #5 - FLEET REPAIR PARTS	51.50	
	HUB REMOVER TOOL - FLEET REPAIR PARTS	136.99	
	UNIT #124 - FLEET REPAIR PARTS	69.89	
	CREDIT ALTERNATOR - FLEET REPAIR PARTS	(70.00)	
	UNIT #685 - FLEET REPAIR PARTS	161.99	
	UNIT #127 - FLEET REPAIR PARTS	295.47	
	UNIT #127 - FLEET REPAIR PARTS	291.87	
	UNIT #125 - FLEET REPAIR PARTS	55.99	
	SHOP SUPPLY - FLEET REPAIR PARTS	68.64	
	CREDIT RETURN - UNIT #127 - FLEET REPAIR PARTS	(295.47)	
	SHOP SUPPLY - FLEET REPAIR PARTS	143.94	
	SHOP SUPPLY - FLEET REPAIR PARTS	89.78	
	SIDE VIEW MIRROR - FLEET REPAIR PARTS	115.19	
	UNIT #134 - FLEET REPAIR PARTS	88.69	
	UNIT #66 - FLEET REPAIR PARTS	295.78	
	TOTAL	1,552.23	
12. BARYAMES CLEANERS	10/16/2023 - 11/16/2023 - POLICE UNIFORM CLEANING	487.31	
13. BETTY ANNE RUPLEY	FARM MARKET VENDOR	18.00	
14. BINGHAM ARS INC	ARBITRAGE REBATE COMPLIANCE FINAL & FEE	900.00	110882
15. BOUNDTREE MEDICAL	ORDER 104779341 - MEDICAL SUPPLIES	125.00	
16. BRD PRINTING, INC	2023 WINTER TAX BILL INSERT	1,051.68	
17. BULL ENTERPRISES	OCT 2023 - SNELL TOWAR JANITORIAL SERVICES	240.00	
18. CAPITOL CITY RIFLE CLUB	2024 DUES - J. CLEMENTS & K. ROYSTON	160.00	
19. CARRIE BALLOU	FARMERS MARKET VENDOR	36.00	
20. CDW	11/18/2023-12/31/2024 - CROWDSTRIKE FALCON ENDPOIN	5,456.67	
21. CHRISTAL EPPS	FARMERS MARKET VENDOR	12.00	
22. CINTAS CORPORATION #725	11/20/2023 - MECHANICS UNIFORMS	48.08	
23. CINZORI FARMS LLC	FARM MARKET VENDOR	386.00	

Vendor Name	Description	Amount	Check #
24. CITY PULSE	10/25/2023 - TWP NOTICES	140.60	
	TWP NOTICES - 11/01/2023	464.72	
	TOTAL	605.32	
25. COMCAST	NOV 29 2023 TO DEC 28 2023 - ACCT 8529 11 416 0214	244.14	110893
	NOV 29 2023 - DEC 28 2023 - PSB 'FREE' DROP	32.28	110893
	NOV 19 2023 - DEC 18 2023 - INTERNET SCADA	254.90	110893
	TOTAL	531.32	
26. COMCAST	DEC 1 2023 - DEC 31 2023 - INT+TV @THB 8529 11 416	531.74	110892
27. CONSOLIDATED ELECTRICAL CONTRACTORS	PERMIT OVERPMT REFUND- HATCH RD	50.00	
28. CONSUMERS ENERGY	S. MAGGARD - EMERGENCY UTILITY ASSISTANCE	211.60	110883
	10/16/2023 - 11/13/2023 - ACCT 100100382264 - TOWN	88.29	110894
	10/12/2023 - 11/09/2023 - ACCT 1001 0010 1938 - NO	112.69	110894
	TOTAL	412.58	
29. CRANDELL BROS TRUCKING CO	SAND FOR VOLLEYBALL COURTS	11,400.00	
30. CRYSTAL FLASH	ACCT 97833 - BILL OF LADING #590389 - FLEET FUEL	14,646.67	
31. CUMMINS INC	11/7/23 - TOWNHALL - GENERATOR MAINT	724.92	
	11/9/23 - FIRE STATION 92 - GENERATOR MAINT	589.43	
	11/9/23 - MERIDIAN FIRE - GENERATOR MAINT	699.67	
	11/16/23 - S. FIRE - GENERATOR MAINT	589.43	
	TOTAL	2,603.45	
32. DANIEL SMITH	GRIND AND HAUL AWAY 38 STUMPS AT VARIOUS PARKS	3,600.00	
33. DAVE FELDPAUSCH	FARMERS MARKET VENDOR	7.00	
34. DAVE SOVIS	FARMERS MARKET VENDOR	30.00	
35. DAVID & ANN BROGREN	FARMERS MARKET VENDORS	19.00	
36. DBI	MESH EXEC CHAIRS CLERKS OFFICE	1,213.80	110895
37. DELL MARKETING LP	ORDER #766256679 - DOCKING STATIONS AMBULANCE/FIRE	3,263.69	
38. DIANA TENNES	FARM MARKET VENDOR	512.00	
39. DOUGHNATION BAKERY	FARM MARKET VENDOR	75.00	
40. ELAINE FLORE	FARMERS MARKET VENDOR	74.00	
41. ELECTION SOURCE	ORDER #33320 - ICX CART & FUTURE VOTER STICKERS	486.50	
42. FORESIGHT GROUP	11/16/2023 - WATER BILLS AND POSTAGE	541.39	
43. FRIEDLAND INDUSTRIES INC	DOCUMENT SHREDDING AT OLD HASLETT LIBRARY	110.00	
44. GENERATION III EXCAVATING	LAKE LANSING - NATURAL SHORELINE DEMONSTRATION PRO	4,200.07	
45. GOLUMBKI GAL	FARMERS MARKET VENDOR	44.00	
46. GUARDIAN TITLE MICHIGAN	ACQUISITION OF CORNELL-SWEETWOOD LAND PRESERVATION	2,500.00	110886
47. HEDLUND PLUMBING	SEMINOLE DR - OVERPMT PLUMBING PERMIT	125.00	
48. HERBERT L CONFER JR	FARM MARKET VENDOR	230.00	
49. HICKORY KNOLL FARMS	FARM MARKET VENDOR	81.00	

11/30/2023 03:04 PM
 User: GRAHAM
 DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN
 EXP CHECK RUN DATES 12/05/2023 - 12/05/2023
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID
 BANK CODE: GF - CHECK TYPE: PAPER CHECK

Vendor Name	Description	Amount	Check #
50. HIGHWATER FARMS	FARMERS MARKET VENDOR	59.00	
51. INGHAM COUNTY SHERIFF DEPT	SRT AMMO FROM COUNTY	3,001.77	
	SRT YEARLY TRAINING	1,425.00	
	TOTAL	4,426.77	
52. JACOB FARLEY	FARM MARKET VENDOR	110.00	
53. JACOB SCARVEY	REIMB HOTEL STAY DURING TRAINING	1,442.28	
54. JEAN S. FIERKE	FARMERS MARKET VENDOR	20.00	
55. JEFF CLARK	FARMERS MARKET VENDOR	8.00	
56. JENNINGS FARMS	FARMERS MARKET VENDOR	81.00	
57. JERMAINE HANG	FARMERS MARKET VENDOR	41.00	
58. JERRY GOODARD	FARMERS MARKET VENDOR	19.00	
59. JULIE TAIBER	FARMERS MARKET VENDOR	48.00	
60. KAREN LEE BURMAN	FARMERS MARKET VENDOR	4.00	
61. KEVIN SCHULTZ	HOTEL STAY 2 POLICE RECRUITS	1,014.86	
62. KIWANIS CLUB OF HASLETT-OKEMOS	10/1/23 - 9/30/24 - DANTE IANNI - MEMBERSHIP	150.00	
63. LAFONTAINE AUTOMOTIVE GROUP	UNIT #678 - REPAIR PARTS	1,200.00	
64. LANSING SANITARY SUPPLY INC	JANITORIAL SUPPLIES FOR PARKS	1,315.60	
65. LANSING TOWNSHIP	ERROR CREDITED MERIDIAN TWP VS LANSING TWP ACCOUNT	24.66	110887
66. LANSING UNIFORM COMPANY	AKERS & STOCK - UNIFORM ITEMS	100.00	
	SCHULTZ/SCARVEY - UNIFORM ITEMS	455.80	
	EGGLESTON - UNIFORM ITEMS	325.70	
	GRILLO & CRANE - UNIFORM ITEMS	369.80	
	WICKS - UNIFORM ITEMS	489.65	
	BARBER - UNIFORM ITEMS	394.70	
	KING - NAME TAG UNIFORM ITEMS	20.00	
	TREVINO - UNIFORM ITEMS	129.90	
	TOTAL	2,285.55	
67. MADISON NATIONAL LIFE INS CO	ACCT 102753800000000 - NOV 2023 LIFE/DISABILITY IN	3,478.19	110897
68. MAMA C'S SAUCES	FARMERS MARKET VENDOR	27.00	
69. MARCUS LESLIE	FARMERS MARKET VENDOR	30.00	
70. MARTIN BRAMAN	FARMERS MARKET VENDOR	21.00	
71. MARYANN SEDAO	FARM MARKET VENDOR	11.00	
72. MI GREAT LAKES FISH COMPANY	FARMERS MARKET VENDOR	98.00	
73. MICHIGAN FIRE INSPECTORS SOCIETY	MI FIRE INSPECTORS ANNUAL DUES (2023 & 2024)	70.00	
74. MIKE KEREKES	FARMERS MARKET VENDOR	39.00	
75. MONICA PETERS	FARMERS MARKET VENDOR	82.00	
76. MOST DEPENDABLE FOUNTAINS	BOWL COVERS FOR ALL PARK FOUNTAINS FOR WINTERIZING	2,010.00	
77. MYCOPHILES GARDEN LLC	FARM MARKET VENDOR	25.00	
78. NATALIE DURAN	FARMERS MARKET	11.00	

11/30/2023 03:04 PM
 User: GRAHAM
 DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN
 EXP CHECK RUN DATES 12/05/2023 - 12/05/2023
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID
 BANK CODE: GF - CHECK TYPE: PAPER CHECK

Vendor Name	Description	Amount	Check #
79. OKEMOS MARATHON	TOWING SEPT 2023 & OCT 2023	1,135.00	
80. OVERHEAD DOOR OF LANSING	OVERHAED DOOR REPAIRS 11/17/2023	308.47	
81. PATRICIA STEVENSON	FARM MARKET VENDOR	163.00	
82. PLAYMAKERS	RUNNING CLUB 27 PARTICIPANTS	1,012.50	
83. PONDSIDE FARM	FARMERS MARKET VENDOR	137.00	
84. PORT CITY ARCHITECTURAL SIGNAGE	2023 WETLAND PROTECTION SIGNAGE PROJECT	2,745.00	
85. PRINT MAKERS SERVICE INC	OCT 2023 KIP COPIER CONTRACT & METER CHARGES	36.62	
86. RICHARD GRILLO	REIMBURSEMENT FOR PODIUM PURCHASE	200.00	
87. ROJAS FARM	FARMERS MARKET VENDOR	279.00	
88. SAMIA'S MEDITERRANEAN GOURMET LLC	FARM MARKET VENDOR	25.00	
89. SHAWN DIEMER	FARM MARKET VENDOR	1,613.00	
90. SHILA KIANDER	TRAINING - STC END OF YEAR ASSESSMENT CYCLE PREP	75.00	110888
91. SPARROW OCCUPATIONAL	OCT 2023 EMPLOYEE PHYSICALS	4,063.00	
92. ST MARTHA CONFERENCE OF	D. DARBY - EMERGENCY RENT ASSISTANCE	538.00	110900
	S. MANSFIELD - EMERGENCY RENTAL ASSISTANCE	368.00	110884
	D. VALERI - EMERGENCY RENT ASSISTANCE	186.50	110899
	TOTAL	1,092.50	
93. STATE OF MICHIGAN	2023 SUMMER TAX PRESORT MAILING	6,475.68	110896
94. STEPHEN GROSE	FARM MRKT VENDOR	1,016.00	
95. STONY LAKE TOFFEE CO	FARMERS MARKET VENDOR	14.00	
96. STRYKER SALES LLC	12-LEAD ECG CABLE	256.88	
97. SUE MCMASTER	FARM MARKET VENDOR	208.00	
98. SUPREME SANITATION	NEWTON ROAD PARK PORTA JON VANDALISM REPLACEMENT P	1,445.00	
	11/1/2023 - 11/30/2023 - HILLBROOK PARK - PORTABLE	90.00	
	11/1/2023 - 11/30/2023 - NANCY MOORE PARK - PORTAB	90.00	
	11/1/2023 - 11/30/2023 - TOWNER RD PARK - PORTABLE	90.00	
	TOTAL	1,715.00	
99. T MOBILE	10/21/23-11/20/23 CELL DATA SERV - 517.980.0920	30.23	
100 THE BLOWHARD COMPANY LLC	BATTERY PACK/POWER ASSEMBLY - FAN REPAIR KIT	773.50	
101 THE CHEESE PEOPLE OF GRAND RAPIDS	FARM MARKET VENDOR	89.00	
102 THE HARKNESS LAW FIRM PLLC	NOV 2023 - PROSECUTION SERVICES	6,829.74	
103 TIMOTHY C. MULVANEY	REPLACE ALL BULBS IN HISTORICAL VILLAGE CHAPEL WIT	980.00	
104 TITUS FARMS LLC	FARM MARKET VENDOR	1,449.00	
105 TOWN & COUNTRY PLUMBING & HEATING	PERMIT CANCELLED 50% REFUND	70.00	
106 TSI INCORPORATED	CALIBRATION MASK MACHINE (FIT TESTING)	846.51	
107 UDDERLY MAGIC LLC	FARMERS MARKET VENDOR	93.00	
108 ULINE	DOG BAGS AND MISC	810.00	

11/30/2023 03:04 PM
User: GRAHAM
DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN
EXP CHECK RUN DATES 12/05/2023 - 12/05/2023
BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID
BANK CODE: GF - CHECK TYPE: PAPER CHECK

Vendor Name	Description	Amount	Check #
109 UNCLE CALVINS SWEET POTATO	PIES FARM MARKET VENDOR	8.00	
110 UNITED STATES TREASURY	ARBITRAGE REBATE PAYMENT	45,396.77	110885
111 VERIZON WIRELESS	OCT 24 - NOV 23 2023 - WIRELESS MOBILE SERVICES 68	2,613.48	
112 WILLIAMSTON GREEN HOUSE & FLORIST	FARM MARKET VENDOR	931.00	
113 WILSON FARM FRESH MEATS	FARMERS MARKET VENDOR	52.00	
TOTAL - ALL VENDORS		171,135.25	

11/30/2023 03:05 PM
User: GRAHAM
DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN
EXP CHECK RUN DATES 12/05/2023 - 12/05/2023
BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID
BANK CODE: PWRZ - CHECK TYPE: PAPER CHECK

Vendor Name	Description	Amount	Check #
1. CUMMINS INC			
	11/6/2023 - SIERRA RIDGE LOAD BANK TEST	582.36	
	11/7/2023 - WILDWOOD LS - GENERATOR MAINT	582.36	
	11/7/23 - TOWAR GARDENS - GENERATOR MAINT	582.36	
	11/8/2023 - MAIN LS - GENERATOR MAINT	699.67	
	11/9/2023 - WOOD VALLEY LS - GENERATOR MAINT	589.43	
	TOTAL	3,036.18	
2. FERGUSON ENTERPRISES LLC	BRASS PARTS	294.66	
3. IDC CORPORATION	COUNTY PARK LIFT STATION PANEL DESIGN	8,480.00	
4. LINDA KRAAI	KANSAS RD - REIMB WATER CONNECTION - SPARROW ESCRO	4,550.00	29556
5. MADISON NATIONAL LIFE INS CO	ACCT 102753800000000 - DEC 2023 LIFE/DISABILITY IN	501.65	29558
6. MERIDIAN TOWNSHIP	3657 KANSAS - SPARROW ESCROW-WATER CONNECTION	3,978.00	29557
7. SA SMITH PAVING & TRUCKING INC	ASPHALT SPOT REPAIR CONTRACT 2023	11,799.75	
8. SAFEWARE, INC.	ORDER #10083203 - CRADLE ONLY - AIR MONITOR	1,440.00	
9. VERIZON WIRELESS	OCT 24 - NOV 23 2023 - 686304174-00001 - WIRELESS	609.57	
TOTAL - ALL VENDORS		34,689.81	

11/30/2023 03:06 PM
User: GRAHAM
DB: Meridian

INVOICE APPROVAL BY INVOICE REPORT FOR CHARTER TOWNSHIP OF MERIDIAN
EXP CHECK RUN DATES 12/05/2023 - 12/05/2023
BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID
BANK CODE: TA - CHECK TYPE: PAPER CHECK

Vendor Name	Description	Amount	Check #
1. BOARDMAN, JAMES & DAWN	2023 SUM TAX REFUND - MT. HOPE RD	3.51	13471
2. CORELOGIC CENTRALIZED RETURNS	SKYLINE DR - JENKINS FAMILY TRUST - 2023 SUM TAX R	2,743.24	13472
	SENECA DR - ROBERT & NATALIE SHEPHERD - 2023 SUM T	2,666.11	13473
	SHAGBARK LN - VICTORIA LAFAVE - 2023 SUM TAX REFUN	3,576.11	13474
	TOTAL	8,985.46	
3. LERETA, LLC	TRAILWOOD DR - CHRISTOPHER MEOAK - 2023 SUM TAX RE	2,664.50	13475
4. MICHIGAN TAX APPEAL SERVICES AND	2023 PROPERTY TAX YEAR REFUND	507.61	13470
5. MID MICHIGAN TITLE AGENCY	CIDER MILL DR - ROBERT & SAMANTHA OLSON - 2023 SU	2,315.62	13476
TOTAL - ALL VENDORS		14,476.70	

Credit Card Report 11/16/2023-11/29/2023

1/3/1900	Merchant Name	Amount	Name
2023/11/16	THE HOME DEPOT #2723	\$43.06	LAWRENCE BOBB
2023/11/16	THE HOME DEPOT #2723	\$9.87	KYLE FOGG
2023/11/16	OFFICEMAX/OFFICEDEPT#3379	\$82.56	LUANN MAISNER
2023/11/16	USPS PO 2569800864	\$23.31	LUANN MAISNER
2023/11/16	BRIMAR INDUSTRIES	\$269.96	DANIEL OPSOMMER
2023/11/16	PETSMART # 0724	\$16.48	ALLISON GOODMAN
2023/11/17	COMPLETE BATTERY SOURCE	\$37.44	CHRISTOPHER JOHNSON
2023/11/17	COSTCO WHSE#1277	\$23.98	CHRISTOPHER JOHNSON
2023/11/17	BESTBUYCOM806813620519	\$100.68	MELISSA MASSIE
2023/11/17	THE HOME DEPOT #2723	\$123.88	MELISSA MASSIE
2023/11/17	AMAZON.COM	(\$112.99)	MICHELLE PRINZ
2023/11/17	AMZN MKTP US	(\$189.90)	MICHELLE PRINZ
2023/11/17	OGDEN NEWSPAPERS	\$20.00	MICHELLE PRINZ
2023/11/17	AMAZON.COM*AY8DQ6HY3	\$149.94	MICHELLE PRINZ
2023/11/17	AMZN MKTP US*FU2E76EW3	\$68.00	MICHELLE PRINZ
2023/11/17	AMZN MKTP US*OI4OW7BR3	\$197.04	CATHERINE ADAMS
2023/11/17	CITY OF LANSING, MI	\$0.97	ED BESONEN
2023/11/17	MIDWAYUSA COM	\$34.98	BART CRANE
2023/11/17	TITANHQ	\$300.00	DANIEL OPSOMMER
2023/11/20	THE HOME DEPOT #2723	\$19.95	LAWRENCE BOBB
2023/11/20	THE HOME DEPOT #2723	\$15.88	LAWRENCE BOBB
2023/11/20	THE HOME DEPOT #2723	\$15.88	LAWRENCE BOBB
2023/11/20	244 AUTO VALUE EAST LANSI	\$20.97	TYLER KENNEL
2023/11/20	GRAINGER	\$168.61	TYLER KENNEL
2023/11/20	FEDEX786491284362	\$15.84	MICHAEL HAMEL
2023/11/20	JACKSON HIRSH INC	\$236.91	MICHAEL HAMEL
2023/11/20	TST* BUDDIES PUB AND GRIL	\$10.00	MICHAEL HAMEL
2023/11/20	THE HOME DEPOT #2723	\$74.87	KYLE FOGG
2023/11/20	BESTBUYCOM806813620519	(\$5.10)	MELISSA MASSIE
2023/11/20	BESTBUYCOM806813620519	(\$0.60)	MELISSA MASSIE
2023/11/20	TST* KLAVONS - MASON	\$46.12	FRANK L WALSH
2023/11/20	ZOOM.US 888-799-9666	\$449.85	STEPHEN GEBES
2023/11/20	AMAZON.COM*GG5Y35133	\$35.38	MICHELLE PRINZ
2023/11/20	AMZN MKTP US*X83SE9HQ3	\$16.98	MICHELLE PRINZ
2023/11/20	MICHIGAN MUNICIPAL LEAGUE	\$425.00	MICHELLE PRINZ
2023/11/20	AMZN MKTP US*8T94T9UF3	\$12.83	MICHELLE PRINZ
2023/11/20	FREEP.COM	\$14.99	MICHELLE PRINZ
2023/11/20	LANSINGSTATE JOURNAL	\$11.99	MICHELLE PRINZ
2023/11/20	AMZN MKTP US*FG7029FO3	\$33.98	MICHELLE PRINZ
2023/11/20	AMAZON.COM*4G4R395E3	\$19.97	MICHELLE PRINZ
2023/11/20	AMZN MKTP US*OQ4R13UJ3	\$296.01	MICHELLE PRINZ
2023/11/20	GANNETT NEWSRPR CN	\$9.99	MICHELLE PRINZ
2023/11/20	AMZN MKTP US*ZF7B94DJ3	\$128.21	CATHERINE ADAMS
2023/11/20	COVERT SCOUTING	\$32.99	ED BESONEN
2023/11/20	BEST BUY 00004168	\$104.98	BART CRANE
2023/11/20	MEIJER # 025	\$54.87	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$64.99	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$51.68	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$55.44	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$71.75	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$64.51	PHIL DESCHAINE
2023/11/20	MEIJER # 025	\$59.59	PHIL DESCHAINE

2023/11/20	MEIJER # 025	\$61.40	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$47.96	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$47.46	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$103.73	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$55.08	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$38.45	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$45.83	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$43.03	PHIL DESCHAIINE
2023/11/20	MEIJER # 025	\$59.82	PHIL DESCHAIINE
2023/11/21	AMZN MKTP US*GD9J584E3	\$820.78	MICHELLE PRINZ
2023/11/21	MEIJER # 025	(\$103.73)	PHIL DESCHAIINE
2023/11/21	MEIJER # 025	\$97.86	PHIL DESCHAIINE
2023/11/21	AMZN MKTP US*KJ1Q78883	\$27.76	PHIL DESCHAIINE
2023/11/21	FACEBK U5LZRVK7T2	\$10.65	SAMANTHA DIEHL
2023/11/21	FACEBK EWZ3YVF7T2	\$190.27	SAMANTHA DIEHL
2023/11/21	WAL-MART #2866	\$88.67	ALLISON GOODMAN
2023/11/22	COMBUSTION RESEARCH CORP	\$238.99	TYLER KENNEL
2023/11/22	ANGELO'S WHOLESALE-123	\$941.38	THOMAS BAKER
2023/11/22	CLARION BOOKS AND VIDEO	\$68.90	BRIAN PENNELL
2023/11/22	OFFICEMAX/OFFICEDEPT#3379	\$31.79	BRIAN PENNELL
2023/11/22	FEEDERS SUPPLY COMPANY #4	\$12.53	CATHERINE ADAMS
2023/11/22	CITY OF LANSING, MI	\$0.75	ED BESONEN
2023/11/22	MEIJER STORE #025	\$4.02	PHIL DESCHAIINE
2023/11/22	AMZN MKTP US*TU26X3EQ3	\$22.47	SAMANTHA DIEHL
2023/11/22	MEIJER # 253	\$6.83	ALLISON GOODMAN
2023/11/24	THE HOME DEPOT 2723	\$413.71	LAWRENCE BOBB
2023/11/24	COSTAR GROUP INC	\$430.00	ASHLEY WINSTEAD
2023/11/24	AMERICAN PLANNING A	\$990.71	TIMOTHY SCHMITT
2023/11/24	QUALITY DAIRY#31	\$51.78	LUANN MAISNER
2023/11/24	QUALITY DAIRY#31	\$3.98	LUANN MAISNER
2023/11/24	HEARST NEWSPAPERSMIDWEST	\$15.96	MICHELLE PRINZ
2023/11/24	THE HOME DEPOT 2725	\$299.88	CATHERINE ADAMS
2023/11/24	COMCAST	\$165.61	BART CRANE
2023/11/24	THE HOME DEPOT #2723	\$14.98	DAN PALACIOS
2023/11/27	GRAINGER	(\$168.61)	TYLER KENNEL
2023/11/27	SP NOVAALAB LLC	\$219.92	RICHARD GRILLO
2023/11/27	AMZN MKTP US*025DS3KF3	\$13.98	MICHELLE PRINZ
2023/11/27	AMZN MKTP US*GR62V0BJ3	\$136.98	MICHELLE PRINZ
2023/11/27	AMAZON.COM*ZB1K61Z23	\$59.99	MICHELLE PRINZ
2023/11/27	AMZN MKTP US*FK3JJ96C3	\$142.38	MICHELLE PRINZ
2023/11/27	AMZN MKTP US*EE7GO2KY3	\$85.26	CATHERINE ADAMS
2023/11/28	PSI - MCOLES	\$75.00	ANDREW MCCREADY
2023/11/28	PSI - MCOLES	\$75.00	ANDREW MCCREADY
2023/11/28	ASFPM	\$80.00	YOUNES ISHRAIDI
2023/11/28	CITY OF LANSING, MI	\$0.97	ED BESONEN
2023/11/28	BRIMAR INDUSTRIES	\$32.22	DANIEL OPSOMMER
2023/11/29	THANK YOU FOR YOUR BUS	\$231.86	ANDREW MCCREADY
2023/11/29	OFFICEMAX/OFFICEDEPT#3379	\$29.99	BRIAN PENNELL
2023/11/29	AMZN MKTP US*LV2I16CY3	\$20.05	MELISSA MASSIE
2023/11/29	HASLETT TRUE VALUE HARDW	\$4.29	CURT SQUIRES
2023/11/29	TREETOP PRODUCTS LLC	\$1,799.39	DANIEL OPSOMMER
2023/11/29	LEIGHTRONIX	\$99.00	SAMANTHA DIEHL
2023/11/29	FEEDERS SUPPLY COMPANY #4	\$142.27	ALLISON GOODMAN

Total	\$12,263.80
-------	-------------

REIMBURSEMENT TO TOWNSHIP:

Date	Employee Name	Amount	Summary of Reimbursement	Transaction Reimbursed
10/23/2023	Frank Walsh	\$41.66	Lunch meeting for six (6)	Lunch meeting with CATA Redi-Ride Millage
11/9/2023	Frank Walsh	\$16.04	Breakfast meeting	Breakfast meeting with Janet Lillie from MSU
10/12/2023	Bart Crane	\$6.92	Sales Tax on Keys Order	Reimbursement for Sales Tax



To: Board Members
From: Michael Hamel, Fire Chief
Date: November 30, 2023
Re: Ratification of New Paramedic/Firefighter Appointments

Emma Brown, from Blissfield, graduated from the Paramedic Program at Owens Community College in 2022. She obtained Fire Fighter I and II certification and HazMat Operations certification in May 2023 from Oakland Community College. She is eager to begin her career in the fire service.

Carson Nitz, from Sault Sainte Marie, will be graduating from Lake Superior State University in December 2023 with a Bachelor of Science degree. She is majoring in Fire Science with a minor in Paramedic Technology. She is certified as a paramedic and has obtained Fire Fighter I and II and HazMat Operations certifications. During the summer of 2023, she was a firefighter/paramedic intern at the City of Alpena Fire Department and has worked most recently as an EMT at Sugar Island Fire Service in Sault Sainte Marie and volunteer firefighter at Dafter Fire Department.

Move to authorize the Fire Department to appoint Emma Brown and Carson Nitz to Full-Time Paramedic/Firefighter.



To: Board Members
From: Rick Grillo, Chief of Police
Date: December 1, 2023
Re: Ratification of New Police Officer Appointments

The Township has presented a conditional offer of employment to two qualified police officer candidates. The prospective hiring will bring the staffing level of the police department to 33 sworn personnel.

Nathan Wicks has a Master's Degree in Criminal Justice from Boston University and earned his Bachelor's Degree in Criminal Justice from Michigan State University. He recently has served as an Officer for Sparrow Hospital.

Alex Barber earned a Bachelor's Degree in Criminal Justice from Ferris State University. He has recently served as a Police Cadet at the City of East Lansing Police Department.

A motion is prepared for Board consideration:

MOVE TO RATIFY THE APPOINTMENTS OF NATHAN WICKS AND ALEX BARBER TO THE POSITION OF POLICE OFFICERS CONTINGENT UPON SUCCESSFUL COMPLETION OF THOSE ITEMS STIPULATED IN THE CONDITIONAL OFFER OF EMPLOYMENT.



TO: Township Board

FROM: Neighborhood & Economic Development Director Amber Clark,

DATE: December 5, 2023

RE: M.A.C Legends Indoor Golf, LLC Liquor License Application

Austin Carpenter is the tenant of the property at 1982 W. Grand River Ave Suite 803 commonly known as M.A.C Legends Indoor Golf. The indoor facility has recently opened in Meridian Mall occupying 4853 sq. ft. of space. A completed application for a new liquor license for this business is being requested. As part of the application to the State of Michigan for a new **Tavern License** to sell at retail, beer, wine and mixed spirit drink products for consumption on premise, the Township Board must grant their approval under authority from the Michigan Department of Licensing and Regulatory Affairs (LARA).

The Township Board is granting local approval of the **Tavern license for M.A.C Legends Indoor Golf LLC.**, which will be submitted to the MLCC along with other required application materials. The MLCC has final approval on issuance of the license.

Motion: Move to adopt the resolution approving the Tavern Liquor License request for M.A.C Legends Indoor Golf, LLC.

Attachments

1. Meridian Township Liquor License Application & Comments from Depts
2. Resolution to approve license application.

LIQUOR LICENSE APPLICATION

CLERK'S USE ONLY			
Date Received: <u>10/10/2023</u>		Non-Refundable Application Fee \$250.00 <input checked="" type="checkbox"/> Paid	
Date Sent to Depts. <u>10/10/2023</u>	Response from Police: <u>10/31/2023</u>	Response from Fire <u>10/31/2023</u>	
Response from Planning & Zoning <u>10/19/23</u>		Response from Building <u>10/19/23</u>	
Date of Township Board Action: <u>11/21/2023</u> Final Action: <u>Approved 6-0</u>			
Circle One Class: C SDM SDD OTHER Tavern		Check one: New <input checked="" type="checkbox"/> Transfer <input type="checkbox"/>	

A non-refundable fee of \$250.00 must accompany this application.

Incomplete applications will be returned to the applicant. By filling out this application form in full and attaching the materials requested, you will assist the Charter Township of Meridian in its effort to promptly review your application for a liquor license. Please attach any additional information or materials you believe will assist the township in its review of your proposal. **This application must bear the signature of the property owner (or the duly authorized representative of all ownership interests) as well as the signature of the applicant or applicant's representative (if different than the property owner).**

1. Contact Information

NAME <u>Mac Austin Carpenter</u>		ADDRESS <u>1514 Tanforan Pl. #</u>	
CITY <u>Okemos</u>	STATE <u>MI</u>	ZIP <u>48864</u>	
EMAIL ADDRESS MAC@ <u>Austin@maclegends.com</u>		PHONE <u>517 425 4727</u>	

2. Location of Business

BUSINESS NAME/DBA/LEGAL NAME <u>MAC Legends Indoor Golf LLC</u>	
ADDRESS <u>Meridian mall 1982 W. Grand River Ave Okemos, MI</u>	PHONE <u>517 349 2031</u>
PARCEL ID NUMBER <u>33-02-02-22-101-011</u>	CIRCLE CLASS TYPE APPLYING FOR <input checked="" type="radio"/> SDM <input type="radio"/> SDD <input type="radio"/> OTHER (PLEASE SPECIFY) <u>Tavern</u>
EXISTING ZONING OF PARCEL <u>Commercial</u>	EXISTING USE OF PARCEL <u>mall Retail</u>
DESCRIBE THE STREET/ROAD ON WHICH THE PROPERTY IS SITUATED <u>Inside of the Meridian mall, corner of Grand River + Marsh Rd.</u>	
DESCRIBE ALL THE LAND USES SURROUNDING THE PROPERTY, INCLUDING THOSE ON EACH SIDE, BEHIND, AND ACROSS THE STREET FROM THE PROPERTY IN QUESTION <u>Inside Meridian Mall (803)</u>	

MERIDIAN CHARTER TOWNSHIP
 5151 MARSH ROAD- OKEMOS, MI 48864
 517.853.4000
 www.meridian.mi.us

STATE THE TOTAL SQUARE FOOTAGE OF EACH BUILDING PROPOSED ON THE PROPERTY 4,853	SEATING CAPACITY 35
DESCRIBE DAY-TO-DAY OPERATION OF THE PROPOSED BUSINESS Golf Retail, Golf simulators, practice facility for all Golfers lounge area, putting green	
HAS THERE BEEN AN APPLICATION BEEN MADE FOR ANY OTHER LICENSE FOR THIS LOCATION BEFORE? No	IF YES, TYPE / DATE / DISPOSITION

3. Applicant Information- This license will be held by:

- An Individual (**Attach** copy of any Assumed Name Certificate)
- A Partnership (**Attach** a copy of Partnership Certificate)
- A Corporation (**Attach** a copy of Articles of Incorporation)
- A Limited Liability Corporation (**Attach** a copy of Articles of Incorporation)

4. Applicant Information (Complete for each owner/partner/officer/stockholder/resident agent, attach additional sheets if needed)

NAME Mac Austin Carpenter	TYPE OF INTEREST IN BUSINESS Owner / CEO	DATE OF BIRTH 09/06/93	
DRIVERS LICENSE NUMBER C-615 570 074 694	CELL PHONE / BUSINESS PHONE 517 425 4727		
STREET ADDRESS 1514 Tanforan Pl	CITY Okemos	STATE MI	ZIP CODE 48864
EMAIL ADDRESS Austin@maclegends.com			
HAVE YOU LIVED AT THE SAME ADDRESS THE LAST TWO YEARS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If your answer to this question was "No", list any other residence address for the last two years			
STREET ADDRESS 1124 W. Maide Marions Ct.	CITY Williamston	STATE MI	ZIP CODE 48895
STREET ADDRESS	CITY	STATE	ZIP CODE

NAME	TYPE OF INTEREST IN BUSINESS	DATE OF BIRTH	
DRIVERS LICENSE NUMBER	CELL PHONE / BUSINESS PHONE		
STREET ADDRESS	CITY	STATE	ZIP CODE

Preparer's Name Karlye A. Horton

Horton Law Office, P.C.

Business telephone number (517) 849-9901

INFORMATION AND INSTRUCTIONS

1. This form may be used to draft your Articles of Organization. A document required or permitted to be filed under the act cannot be filed unless it contains the minimum information required by the Act. The format provided contains only the minimal information required to make the document fileable and may not meet your needs. This is a legal document and agency staff cannot provide legal advice.
2. Submit one original of this document. Upon filing, the document will be added to the records of the Corporations, Securities & Commercial Licensing Bureau. The original will be returned to your registered office address unless you enter a different address in the box on the front of this document.
Since this document will be maintained on electronic format, it is important that the filing be legible. Documents with poor black and white contrast, or otherwise illegible, will be rejected.
3. This document is to be used pursuant to the provisions of Act 23, P.A. of 1993, by one or more persons for the purpose of forming a domestic limited liability company. **Use form BCS/CD 701 if the limited liability company will be providing services rendered by a dentist, an osteopathic physician, a physician, a surgeon, a doctor of divinity or other clergy, or an attorney-at-law.**
4. Article I - The name of a domestic limited liability company is required to contain the words Limited Liability Company or the abbreviation L.L.C. or L.C., with or without periods.
5. Article II- Under section 203(b) of the Act, it is sufficient to state substantially, alone or with specifically enumerated purposes, that the limited liability company is formed to engage in any activity within the purposes for which a limited liability company may be formed under the Act.
6. Article V - Section 401 of the Act specifically states the business shall be managed by members unless the Articles of Organization state the business will be managed by managers. If the limited liability company is to be managed by managers instead of by members, insert a statement to that effect in Article V.
7. This document is effective on the date endorsed "Filed" by the Bureau. A later effective date, no more than 90 days after the date of delivery, may be stated as an additional article.
8. The Articles must be signed by one or more persons organizing the Limited Liability Company. Type or print the name of the organizers signing beneath their signature.
9. If more space is needed, attach additional pages. All pages should be numbered.
10. **NONREFUNDABLE FEE:** Make remittance payable to the State of Michigan. Include limited liability company name on check or money order.....**\$50.00**
Veterans: Pursuant to MCL 450.5101(7)(8)(10), if a majority of the initial membership interests in the domestic limited liability company will be held by 1 or more veterans who served in the United States Armed Forces, (including the reserve components) who were discharged or released under conditions other than dishonorable, you may obtain further information regarding a fee waiver at www.michigan.gov/corpveteranfeewaivers.

Submit with check or money order by mail:
 Michigan Department of Licensing and Regulatory Affairs
 Corporations, Securities & Commercial Licensing Bureau
 Corporations Division
 P.O. Box 30054
 Lansing, MI 48909

To submit in person:
 2501 Woodlake Circle
 Okemos, MI
 Telephone: (517) 241-6470
 Fees may be paid by check, money order, VISA, MasterCard,

COFS (Corporations Online Filing System):
 This document may be completed and submitted online at www.michigan.gov/corpfilingonline.
 Fees may be paid by VISA, MasterCard, or Discover.

Documents that are endorsed filed are available at www.michigan.gov/corpenitysearch. If the submitted document is not fileable, the notice of refusal to file and document will be available at the Rejected Filings Search website at www.michigan.gov/corprejectedsearch.

LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

THIS CERTIFICATE AND THE UNITS OF MEMBERSHIP INTERESTS THIS CERTIFICATE REPRESENTS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR ANY STATE SECURITIES LAWS AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, HYPOTHECATED, OR OTHERWISE DISPOSED OF EXCEPT IN COMPLIANCE WITH SUCH LAWS AND ANY RESTRICTIONS CONTAINED IN THE OPERATING AGREEMENT FOR THE LIMITED LIABILITY COMPANY, A COPY OF WHICH IS AVAILABLE AT THE PRINCIPAL OFFICE OF THE COMPANY.

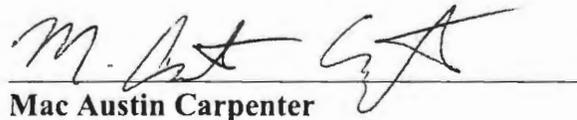
CERTIFICATE OF MEMBERSHIP INTERESTS

MAC LEGENDS INDOOR GOLF, LLC
A MICHIGAN LIMITED LIABILITY COMPANY
(THE "LIMITED LIABILITY COMPANY")

Certificate No. - 1 -

Mac Austin Carpenter is the owner of 1000 units of membership interests of the Limited Liability Company. This Certificate is not, however, an instrument of title or a negotiable instrument.

Dated: October 3rd, 2023



Mac Austin Carpenter
Authorized Member

Prepared by:
HORTON LAW OFFICE, P.C.
By: Karlye A. Horton, Esq.
247 East Chicago Street
Jonesville, Michigan 49250
Phone: (517) 849-9901

MERIDIAN CHARTER TOWNSHIP
 8711 MARSH ROAD OKEMOS MI 48864
 517 853 1000
 www.meridianmi.net

DOES ANY OTHER PARTY HAVE AN INTEREST IN THE BUSINESS? YES NO

If your answer to the question was No, list a (if other residence address) for the last two years

HOME ADDRESS	CITY	STATE	ZIP CODE
SCHOOL ADDRESS	CITY	STATE	ZIP CODE

5. **Attach** a copy of the applicant's driver's license
6. **Attach** building plans showing the entire structure and premises and specific areas where the license is to be utilized.
7. **Attach** a preliminary site plan showing the relationship of the proposed or existing building to the surrounding property and uses, including proposed parking facilities and lighting. An architect's rendering or a clear photograph of the building must accompany the preliminary site plan.
8. **Attach** a statement as to the Applicant's experience in owning, managing, operating, and or financing this type of business or any related business, including previous business references.
9. **Attach** a statement and supporting documentation providing evidence that the Applicant is financially able to meet the obligations and business undertakings for which the license is to be issued.
10. **Attach** if this is an application involves the transfer of a Class C Liquor License within three (3) years of its original issue date, a copy of the executed and binding contract for the buy/sell of the License and or the business for review.

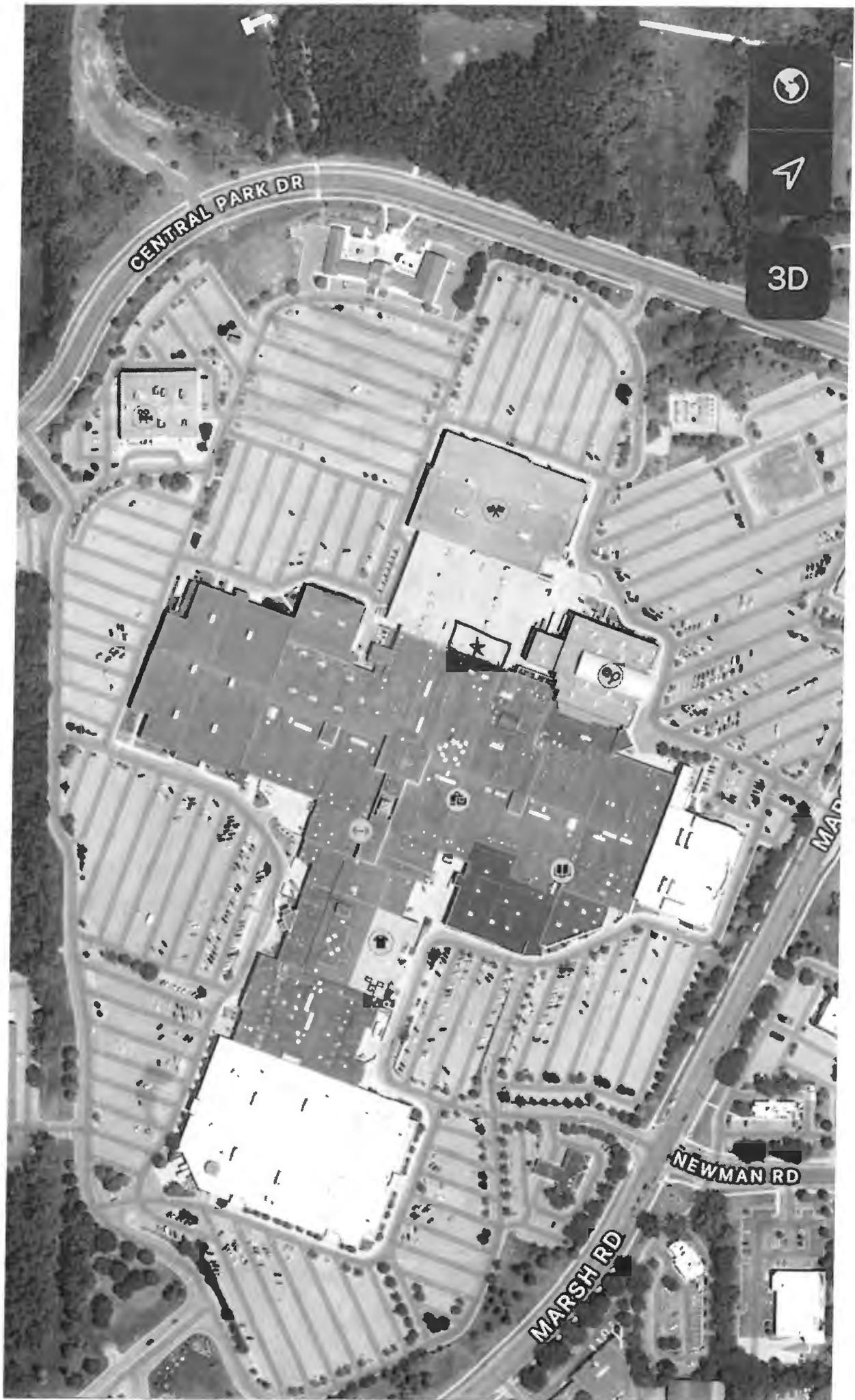
11. Property Owner

NAME	MERIDIAN MALL LIMITED PARTNERSHIP, a Michigan limited partnership by CBL & Associates Management, Inc., its managing agent	TYPE OF ENTITY	NA
STREET ADDRESS	1982 W. Grand River Ave.	CITY	Okemos
		STATE	MI
		CITY/ZIP	48864
CELL PHONE BUSINESS PHONE	(517)349-2031	EMAIL ADDRESS	Amanda.Chesher@cblproperties.com

12. Business History

DOES THE APPLICANT CURRENTLY HOLD A LIQUOR LICENSE? CLASS C, SSB, SSB, OTHER	BUSINESS NAME and BUSINESS TYPE	YEAR LICENSE WAS OBTAINED
No		
STREET ADDRESS	CITY	STATE
		CITY/ZIP

7.



7.



Primary Parking

Main mall Entrance

★

∞

∞

∞

∞

∞

∞

∞

∞

∞

∞

∞

∞

∞

8) I, Mac Austin Carpenter, have been the owner of MAC Legends Golf Center in Okemos for over 2.5 years. When I first walked into the pro shop after taking over, it smelled like feces and urine. The grass was dead. And the business had been neglected for a few years. Year one we rehabbed everything and added a few golf items for purchase. Year 2 we added subscription memberships and kept adding more merchandise and saw an increase in revenue by 35%. Now at year 3 we have the largest selection of used golf clubs in the state of Michigan and we bring in customers from over an hour away. Because of this addition we have increased revenue by over 100% since year 2. We have the same plan to start strong and finish stronger with this new winter location.

9) This entire new location is being built with profits taken from the driving range. And additionally is backed and supported by myself, Mac Austin Carpenter, who is able to meet the financial requirements for this business and license.

14) This business is whether it has alcohol or not, will be a big hit in the community. It will provide a safe, non-intimidating, FUN place to practice, learn and play golf. It will also have a positive impact on the mall because golfers are addicts :) and if you build it, they will come. It will be a great combination of a place where serious golfers can get good practice but also a fun atmosphere where you could learn to play golf or enjoy a round with your friends. Providing alcohol in combination with having the food court down the hallway, I know it will enhance the overall experience for everyone involved.

15) The mission of Meridian Township is to provide a safe and welcoming, sustainable, prime community. I know MAC Legends Indoor Golf will be a welcomed improvement to the community and will help the township's mission. Alcohol sales are not a necessity for this mission, but it helps enhance the overall experience in many cases. In addition, the alcohol sales will create an additional revenue stream that will allow us to build and improve at a faster pace. The quicker we can build, the more we can help the community. With the extra profits we will also be able to enhance the driving range location (MAC Legends Golf Center) which in turn will enhance the character of the area.

HAS THE APPLICANT PREVIOUSLY HELD A LIQUOR LICENSE? CLASS C / SDD / SDM OTHER No	IF YES , BUSINESS NAME	YEAR LICENSE WAS OBTAINED	
STREET ADDRESS	CITY	STATE	ZIP CODE
HAS THE APPLICANT EVER HAD A LIQUOR LICENSE SUSPENDED OR REVOKED? CLASS C / SDD / SDM OTHER No	IF YES , BUSINESS NAME and BUSINESS ID #	YEAR LICENSE WAS SUSPENDED OR REVOKED AND REASON	
STREET ADDRESS	CITY	STATE	ZIP CODE

13. Violation History

Has Applicant/Any Partner/Officer/Manager/Resident Agent been convicted of (attach additional sheets if needed):

- A felony
- Operating under the influence of Liquor or a Controlled Substance
- Operating with an Unlawful Bodily Alcohol Level
- Operating While Intoxicated
- Operating While Visibly Impaired
- Selling/Furnishing Alcohol to a Person under 21

NONE

Name	Date of Conviction	Arresting Agency	Nature of Offense	Punishment (not including fines and costs)

Does the Applicant/Any Partner/Officer/Manager/Resident Agent have a permit to carry a concealed weapon?

YES NO

Do you plan to keep weapon on premises? YES NO

14. Relevance to Community Goals

Describe what you believe are the overall benefits that the proposed establishment would provide to the Township and the betterment of the community.

SEE Attached

15. Describe what impact the proposed establishment will have on the character of the area

SEE Attached

16. Certification

I, the undersigned applicant, give permission to the Officials of the Charter Township of Meridian and its Consultants to enter the property that is the subject of this Application for purposes of inspection to review and verify the information on the application. This inspection will occur during business hours and will only include entry into a building upon mutually agreeable arrangement with the applicant and/or property owner.

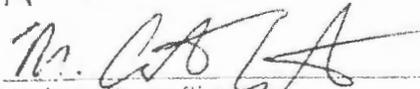
I, the undersigned applicant, have read and understand each and every provision and requirement of Meridian Charter Township Code of Ordinances regarding the regulation of sales of liquor in the Township; and I will provide such other information that the Township requests and deems necessary, in its reasonable discretion, to discover the truth of the matters required to be set forth in this application or required by Township Ordinances.

I, the undersigned applicant, hereby swear that all of the statements, answers and information I have provided as part of this application are true, accurate and complete to the best of my knowledge. And I understand and acknowledge that any falsehoods or misrepresentations contained in such statements, answers or information can, among other things, be the cause of a denial of the requested license and cause for the revocation of any license issued to the applicant under Chapter _____ of the Meridian Township Code.

I understand and agree that adult entertainment will not be permitted in the establishment. Adult entertainment includes, but is not limited to, nudity, nude dancing, lap dancing, topless dancing, wet tee-shirt contests, or any actual or simulated sexual acts. I understand and agree that permitting adult entertainment in the establishment is grounds for the Township to request that the State revoke any liquor license issued for the establishment.

I have attachments with this application. I do not have attachments with this application.

MERIDIAN MALL LIMITED PARTNERSHIP, a
Michigan limited partnership by CBL & Associates, Inc.,
its managing agent


Business Owner Signature

Mac Austin Carpenter
Business Owner Name Printed Date

Acknowledged before me on 10/9/23, 2023


Property Owner Signature
Jeff Gregerson
Sr. VP Specialty Leasing and Advertising
Property Owner Printed Name Date

Acknowledged before me on Oct. 9th, 2023

Property Owner joins in signature to only represent and warrant its ownership of the property and the location of the premises. Property Owners makes no other representations or warranties.

Deborah Guthrie
Notary Public

Ingham County, Michigan

Notary Public

County, Michigan

My Commission Expires: September 28, 2026

My Commission Expires: _____

Acting in Ingham County, Michigan

Acting in _____ County, Michigan

17. Oath

I swear or affirm that if this application is granted and a license is issued, I will not violate any applicable laws or ordinances of the State of Michigan, County of Ingham, or Charter Township of Meridian in the conduct of the business.

SIGNED M. BA LJA

Taken, subscribed and sworn to before me this 10th day of October, 2023

M. BA LJA
SIGNED

Owner/CEO
TITLE



Meridian Township
5151 Marsh Road
Okemos, MI 48864

P 517.853.4000
F 517.853.4096

Township Board:

Patricia Herring Jackson
Township Supervisor

Deborah Guthrie
Township Clerk

Phil Deschaine
Township Treasurer

Scott Hendrickson
Township Trustee

Kathy Ann Sundland
Township Trustee

Marna Wilson
Township Trustee

Courtney Wisinski
Township Trustee

Frank L. Walsh
Township Manager

31 October 2023

Clerk Guthrie,

I have reviewed the liquor license application for the property located at 1982 Grand River Avenue in Okemos doing business as MAC Legends Golf. A background check was completed for the owner of the business, Mac Carpenter, using both local databases as well as a criminal history check using iCHAT. No violation history was found for Mr. Carpenter of the location. The site plan appears to be appropriate as well.

Thank you,

10/31/23

Chief Rick Grillo

Date

RE: Liquor License Application- M.A.C Legends Indoor Golf LLC 1982 W. Grand River Ave

Tim Schmitt <schmitt@meridian.mi.us>

Tue 10/10/2023 12:05 PM

To: Amber Clark <clark@meridian.mi.us>

CPD has no concerns with the application.

**Timothy R. Schmitt, AICP**

Director of Community Planning and Development

[schmitt@meridian.mi.us]schmitt@meridian.mi.us

W 517.853.4506

5151 Marsh Road | Okemos, MI 48864

meridian.mi.us

From: Amber Clark <clark@meridian.mi.us>**Sent:** Tuesday, October 10, 2023 11:58 AM**To:** Clerk's Office <clerksoffice@meridian.mi.us>; Tavis Millerov <millerov@meridian.mi.us>; Michael Hamel <hamel@meridian.mi.us>; Bart Crane <crane@meridian.mi.us>; Tim Schmitt <schmitt@meridian.mi.us>; John Heckaman <heckaman@meridian.mi.us>; Deborah Guthrie <guthrie@meridian.mi.us>; Emily Gordon <gordon@meridian.mi.us>**Cc:** Austin Carpenter <austin@maclegends.com>**Subject:** Liquor License Application- M.A.C Legends Indoor Golf LLC 1982 W. Grand River Ave**Importance:** High

Hello All,

Attached you will find the complete Liquor License request from Austin Carpenter owner of M.A.C Legends. Austin is opening a virtual golf simulation business at 1982 W. Grand River Ave (Meridian Mall). Please review the attached applications and submit comments. I have copied Mr. Carpenter to this email and should you have any questions please feel free to contact him.

Amber Clark

Neighborhood and Economic Development Director

clark@meridian.mi.us

Office: 517.853.4568

5151 Marsh Road | Okemos, MI 488640

www.meridian.mi.us

RESOLUTION TO APPROVE

**Liquor License Request
M.A.C Legends Indoor Golf LLC
1982 W. Grand River Ave, Suite 803**

RESOLUTION

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at Meridian Township Hall, 5151 Marsh road, Okemos MI, 48864, on the _____ day of December at 6:00 p.m., Local Time.

PRESENT: _____

ABSENT: _____

The following resolution was offered by _____ and supported by _____.

WHEREAS, The Township Board and Licensing and Regulatory Affairs of the Michigan Liquor Control Commission, authorized their approval of M.A.C. Legends Indoor Golf, LLC, liquor license request at 1982 W Grand River Ave Suite 803, for a **Tavern Beer and Wine Liquor License**; and

WHEREAS, M.A.C Legends Indoor Golf LLC, requested a new quota liquor license approval from Meridian Township and the Michigan Liquor Control Commission for a Tavern Beer and Wine license to sell beer, wine, and spirits for on premise consumption at the M.A.C Legends Indoor Golf LLC, recreational enterprise at 1982 W. Grand River Ave, Suite 803; and

WHEREAS, the subject property is located in the C-2 (Commercial) zoning district, which allows recreational use, subject to site plan review; and

WHEREAS, the 1 room, 4,853 approximate square foot suite has been operating on the site since 1959; and

WHEREAS, the request does not conflict with our Master Plan; and

WHEREAS, the business will be conducted inside Meridian Mall, members of the general public including children ages 0-18 will may be in the vicinity of the establishment. M.A.C. Legends will agree to adhere to the strictest standards to maintain the health and safety of the general public during operations; and

WHEREAS, M.A.C. Legends Indoor Golf, LLC is responsible for complying with all applicable local and State laws related to the sales of beer, wine, and spirits as permitted by the Michigan Liquor Control Commission (MLCC) and any other relevant entities; and

NOW THEREFORE, BE IT RESOLVED THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of the Tavern Beer and Wine Liquor License request from M.A.C. Legends Indoor Golf, LLC to sell beer, wine, and spirits at 1982 W Grand River Avenue, Suite 803.

ADOPTED:
YEAS: _____

NAYS: _____



9. G

To: Board Members
From: Frank L. Walsh, Township Manager
Date: November 21, 2023
Re: Set a Date for Township's Annual Goal Setting

The Management Team is currently preparing a 2023 Action Plan Review and a draft 2024 Action Plan with goals and objectives. We will provide the entire document to you on Friday, December 8. The Township Board is being asked to establish a date and time to review 2023 and chart a course for 2024. For the past decade, this process has been separate from a regularly scheduled Board meeting. This process has allowed the elected body plenty of time to focus on “where we are and where we are going.”

**MOVE TO SET A DATE AND TIME OF DECEMBER 18, AT 5:00 PM TO
CONDUCT MERIDIAN TOWNSHIP'S ANNUAL GOAL SETTING PROCESS.**



To: Board Members
From: Michael Hamel, Fire Chief
Date: November 30, 2023
Re: Ordinance 2023-07-Fire Protection and Emergency Services Cost Recovery Ordinance Update – Final Adoption

The Fire Department proposes the addition of Article III to Chapter 18 of the Township Code of Ordinances to inform the public and other applicable parties of cost recovery charges for emergency response within the Township’s jurisdictional limits.

The intention of Article III is to fairly allocate the costs of providing fire department services and other emergency services among those responsible for them. The article establishes a policy and sets forth the methods by which it may recover costs incurred in making appropriate responses and providing the related services.

The following is a non-exhaustive list of fire protection services and other emergency services that shall be billable and collectible as cost recovery charges (Article III, Section 18-32). For clarification, even though these services are deemed “billable,” this does not mean the Township is required to bill for them—that would depend on the Township’s fee schedule.

- (a) Responding to a multi or single motor vehicle accident resulting in a fire or requiring non-HAZMAT cleanup.*
- (b) Responding to a grass, rubbish, motor vehicle, aircraft, train, tree or forest, house, multiple-family building, hotel, motel, or other commercial establishment fire.*
- (c) Responding to requests for emergency medical services.*
- (d) Responding to requests to provide ambulance services.*
- (e) Responding to a downed power line or other non-HAZMAT public utility hazard response.*
- (f) Responding to excessive requests for emergency assistance.*
- (g) Responding to a bomb threat.*
- (h) Responding to a threat to harm oneself or others.*
- (i) Demolition of a structure.*
- (j) Other emergency or rescue service(s) not covered by Article I or II of this Chapter, or Article II of Chapter 22.*
- (k) Other services not specifically listed that are determined by the Meridian Township Fire Department Chief to be fire protection or other emergency services.*

The following motion is proposed for Board consideration:

MOVE TO ADOPT THE UPDATED COST RECOVERY ORDINANCE NO. 2023-07 AMENDING CHAPTER 18 OF THE CODE OF THE CHARTER TOWNSHIP OF MERIDIAN TO INCLUDE THE ADDITION OF ARTICLE III “FIRE PROTECTION AND EMERGENCY SERVICES” AND AUTHORIZE THE CLERK AND SUPERVISOR TO SIGN THE ORDINANCE.

ORDINANCE NO. 2023-07

**ORDINANCE AMENDING CHAPTER 18 OF THE CODE OF THE CHARTER TOWNSHIP OF
MERIDIAN, INGHAM COUNTY, MICHIGAN BY ADDING ARTICLE III
FIRE PROTECTION AND EMERGENCY SERVICES COST RECOVERY**

THE CHARTER TOWNSHIP OF MERIDIAN ORDAINS:

Section 1. Amendment to Chapter 18, Article II of the Code of Ordinances. The code of the Charter Township of Meridian, Ingham County, Michigan, Chapter 18, Article II, shall be amended to reserve Sections 18-21 through 18-29 for future use.

Section 2. Amendment to Chapter 18 of the Code of Ordinances by adding Article III. The Meridian Charter Township Code of Ordinances, Chapter 18, shall be amended to add the following new and additional Article III entitled Fire Protection and Emergency Services Cost Recovery, which shall read as follows:

**ARTICLE III
Fire Protection and Emergency Services Cost Recovery**

Section 18-30. Definitions.

The following words, terms, and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

BOMB THREAT

The verbal or written threat of a bomb or other explosive device which, if discharged as threatened, would violate a federal, state, or local law.

COST RECOVERY CHARGES

Include the non-exhaustive list of fire protection services and other emergency services enumerated in § 18-32 of this article.

DEMOLITION OF A STRUCTURE

The tearing down of a structure damaged by fire that must, as determined by the Meridian Township Fire Department Fire Chief, be promptly demolished following the fire to protect public safety.

DIRECT BENEFIT

Receiving a “direct benefit” means causing, requesting, or being involved in an accident or incident within the Township’s jurisdictional limits that causes a response by the Township (i.e., dispatching a fire truck or an ambulance) to provide fire or other emergency services. Receiving a “direct benefit” shall also include instances where a medical or care facility (including its employees, agents, and contractors) causes or requests the Township to provide non-emergent transportation to one of the facility’s patients, residents, or occupants.

DOWNED POWER LINE OR OTHER NON-HAZMAT PUBLIC UTILITY HAZARD RESPONSE

The disabling of any transmission, distribution, or service line, cable, conduit, pipeline, wire or the like used to provide, collect, or transport electricity, natural gas, communication or electronic signals (including, but not limited to, telephone, computer, cable television, and stereo signals or electronic impulses), water or sanitary or storm sewage if the owner or party responsible for the maintenance of such utility line does not respond within one hour to a request to repair or correct such failure.

EXCESSIVE REQUESTS FOR EMERGENCY ASSISTANCE

Any request for emergency assistance made to a particular location if emergency assistance has been requested to such location more than five times in the preceding thirty days.

MOTOR VEHICLE

Any self-propelled or towed vehicle designed or used on the public streets, roads, and highways to transport passengers or property which is required to be registered for use upon such public streets, roads, and highways. For the purposes of this article, all trailers and appurtenances attached to any motor vehicle are deemed to be a motor vehicle.

RESPONSIBLE PERSON

An individual, firm, corporation, association, partnership, entity, consortium, or joint venture responsible for cost recovery charges and receiving a direct benefit from the fire protection services and/or other emergency services provided by the Township, and the heirs, estates, successors, and assigns of such responsible person(s), subject to any limitations expressly stated in § 18-35 (Exemptions) and § 18-37 (Multiple Responsible Persons) herein.

TOWNSHIP

The Charter Township of Meridian and all of its departments, specifically including the Meridian Township Fire Department.

Section 18-31. Findings and Purpose.

This article is adopted to enable the Township to bill for and collect “cost recovery charges,” as defined herein, from those receiving direct benefits from fire department services and other emergency services provided by the Township, pursuant to state law, including Public Act 33 of 1951, being MCL § 41.801 *et seq.*

The Township finds that this article is necessary to fairly allocate the costs of providing fire department services and other emergency services among those responsible for them. The Township further finds that this article is necessary to establish a policy and set forth the methods by which it may recover costs incurred in making appropriate responses and providing services in connection with same.

It is expressly the purpose of this article to provide for and promote the safety and welfare of the general public and not to create or designate any particular class of persons who will or should be specially protected by its terms.

Section 18-32. Cost Recovery Charges.

Subject to Section 18-35 of this article (Exemptions), the following is a non-exhaustive list of fire protection services and other emergency services that, when provided by the Township within the Township’s jurisdictional limits, are billable and collectible as “cost recovery charges” in accordance

with the Township's Resolution Adopting Fee Schedule for this article and the fee schedule attached thereto.

- (a) Responding to a multi or single motor vehicle accident resulting in a fire or requiring non-HAZMAT cleanup.
- (b) Responding to a grass, rubbish, motor vehicle, aircraft, train, tree or forest, multiple-family building, hotel, motel, or other commercial establishment fire.
- (c) Responding to requests for emergency medical services.
- (d) Responding to requests to provide ambulance services.
- (e) Responding to a downed power line or other non-HAZMAT public utility hazard response.
- (f) Responding to excessive requests for emergency assistance.
- (g) Responding to a bomb threat.
- (h) Responding to a threat to harm oneself or others.
- (i) Demolition of a structure.
- (j) Other emergency or rescue service(s) not covered by Article I or II of this Chapter, or Article II of Chapter 22.
- (k) Other services not specifically listed that are determined by the Meridian Township Fire Department Chief to be fire protection or other emergency services.

Section 18-33. Time for Payment of Cost Recovery Charges.

The cost recovery charges under this article are due and payable by the responsible person(s) within 30 days from the date on the Township's invoice mailed to the last known address of the responsible person(s). If payment is not received within 30 days, such cost recovery charges are collectible through proceedings in district court or in any court of competent jurisdiction as a matured debt.

Section 18-34. Collection of Charges.

Upon the failure of a responsible person(s) to pay the cost recovery charges due within the time limit for payment provided in § 18-33 (Time for Payment of Cost Recovery Charges), the Township Treasurer shall have the right and power to add all cost recovery charges to the tax roll of the property of the responsible person(s) in the Township from which, upon which, or related to which the cost recovery charges were incurred and to levy and collect such costs in the same manner as provided for the levy and collection of real property taxes against such property or premises. In addition, the Township Treasurer may collect any overdue amounts from the responsible person(s) in any other manner permitted by law, including the filing of a collection suit in a court of competent jurisdiction. Any overdue amounts shall bear interest at the rate set forth in the annual schedule of fees.

Section 18-35. Exemptions.

The following properties and services are exempt from cost recovery charges under this article:

- (a) Responding to a fire involving Township buildings, grounds, and/or property.
- (b) Responding to a fire or providing other emergency services that are provided and performed outside of the Township. Notwithstanding such exemption for services provided outside of the Township, the Township and other municipalities may adopt (an) ordinance(s) to impose fees for fire and emergency service runs within their respective territories under MCL 41.801 *et seq.*, as amended, and may otherwise contract for recovery of costs in their respective territories through measures including, but not limited to, a mutual aid agreement allowing for cost recovery.

Section 18-36. Non-Exclusive Charges.

Cost recovery charges are not the only charges that may be made by the Township for the costs and expenses of providing fire protection and other emergency services within the Township's jurisdictional limits. Additional charges may be collected by the Township through general taxation after an approving vote of the electorate or by a special assessment established under the applicable Michigan statute(s). General fund appropriates may also be made to cover such additional costs and expenses of providing fire protection and other emergency services.

Section 18-37. Multiple Responsible Persons.

When a particular fire protection or other emergency service rendered by the Township directly benefits more than one person, each person so benefited is jointly and severally liable for the payment of the full charge for such service. Provided, however, that if a court of competent jurisdiction determines that one or more persons who received fire protection or other emergency service rendered by the Township was at fault for the incident resulting in such service, the other person(s) involved in the incident shall not be considered "responsible persons" for the purposes of this article.

Section 18-38. Appeal.

- (a) Any person who has been billed may appeal the assessment of cost recovery charges to the Meridian Township Fire Department Chief. Such appeal shall be in writing, shall be filed with the Fire Chief within the time limit for payment provided in § 18-33 (Time for Payment of Cost Recovery Charges), and shall state every reason why the cost recovery charges should not be paid, supporting such with adequate and verifiable facts. The Fire Chief shall render a decision on the appeal and shall notify the appellant and the Township Treasurer of the decision in writing. The Fire Chief may, in his or her discretion, waive or reduce cost recovery charges, based on the information submitted.
- (b) Any person aggrieved by the decision of the Fire Chief made pursuant to § 18-31(a) may file a written appeal, along with any supporting documentation, with the Township Manager within 30 days after the date of the written decision by the Fire Chief. The Township Manager shall determine whether the decision of the Fire Chief is supported by the documents and information in the file.

(c) The Township Treasurer shall defer collection of cost recovery charges while any appeal is pending; provided, however, that any interest allowed on cost recovery charges shall continue to accrue during the appeal period.

Section 18-38. Non-Applicability of No Fault Act.

This ordinance provides authority to the Township to collect cost recovery charges for fire and emergency services provided by the Township, and within the Township, to a responsible person(s). No claim under this ordinance is for, or relates to, property damage(s). Michigan's No Fault Act, as amended, MCL 500.3101 *et seq.*, does not apply to, conflict with, or preempt this ordinance.

Section 18-39. No Limitation of Liability.

The collection of cost recovery charges pursuant to this article does not limit the liability of a responsible person under applicable local, state, or federal law.

Section 3. Validity and Severability. The provisions of this Ordinance are severable and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of the Ordinance.

Section 4. Repealer Clause. All ordinances or parts of ordinances in conflict therewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 5. Savings Clause. This Ordinance does not affect rights and duties matured, penalties that were incurred, and proceedings that were begun, before its effective date.

Section 6. Effective Date. This Ordinance shall become effective immediately upon its publication.

Patricia Herring Jackson
Township Supervisor

Deborah Guthrie
Township Clerk



To: Township Board

**From: Timothy R. Schmitt, AICP
Community Planning and Development Director**

Date: November 30, 2023

Re: Ordinance 2023-06 - Rezone 5010 Park Lake Road and Adjacent Vacant property - RA to RD, with a Conditional Rezoning Agreement

At the Township Board’s meeting on November 21st, initial discussion occurred on the proposed Ordinance 2023-06. This is a request from Redwood Living for rezoning of 8.72 acres of land at 5010 Park Lake Road, which is currently vacant, and a portion of the vacant adjacent property. The request is to rezone the property from RA, Single Family-Medium Density, to RD, Multiple Family – maximum eight dwelling units per acre, with the following conditions offered by the applicant:

1. Limit the types of permitted uses to attached townhouse style units and typical accessory/related uses
2. Building height shall be no greater than 16 feet and one story.
3. Building length shall not exceed 196 feet in length.
4. Each unit’s floor area minimum shall be 1,200 square feet.
5. All roads are to be private roads.
6. The conditional rezoning to RD – Multiple Family is conditioned on Redwood consummating its purchase of the property.
7. The proposed development will not exceed 106 dwelling units.
8. No development with respect to buildings or roadways will be placed outside of the area described on Exhibit B of the conditional rezoning legal description. (Staff Note: This means that the 14+ acres that runs north south between the Sapphire Lakes common area and Heather Circle will remain undeveloped
9. No clubhouses, pools, tennis or basketball courts, or gymnasiums are allowed to be constructed on the property.

The Planning Commission held a public hearing on September 25, 2023 and received a great deal of public feedback. They again reviewed the matter on October 23, 2023 and recommended denial to the Township Board, largely due to the request not being fully in compliance with the Future Land Use map in the Master Plan. The Township Board’s discussion on the 21st was vibrant, but also raised a number of concerns with the proposal. The applicant has provided an updated response letter, addressing some of the new concerns that were raised by the Board, which is attached to this memo.

The Township Board has three options to consider in order to proceed:

1. The Board can move to introduce the ordinance for adoption, with adoption coming at the next meeting, after Staff has published the notice in the newspaper.
2. The Board can move to deny the request at this time. No publication would be made further on the request and this would be the final action the Board would need to take on the application.
3. The Board could refer the matter back to the Planning Commission for further discussion. In this situation, the Board would identify additional or new information that has been



Rezoning 2023-06 (Vacant Park Lake)
Township Board December 5, 2023 Meeting
Page 2

raised with respect to the application and refer the matter back to the Planning Commission for further analysis.

Regardless of the decision, Staff strongly recommends that the Township Board members articulate their reasons for approval, denial, or referral back to the Planning Commission on the record.

Staff continues to **recommend approval** of the proposed ordinance, specifically because it is a conditional rezoning, not a traditional rezoning. As we noted to the Planning Commission, this is a borderline case, only because of the conditions being offered. If a traditional rezoning had been requested, Staff would recommend denial. Given that the applicant is limiting the density on the site to what the Future Land Use map recommends, Staff believes it is an acceptable proposal. If that limitation did not exist, we would be recommending denial.

Staff would offer the following motions for the Township Board's use in discussing the matter.

OPTION 1: Introduction

Move to adopt the resolution approving for introduction Ordinance 2023-06, an ordinance to rezone the property at 5010 Park Lake Road and a portion of the adjacent vacant property (Parcel ID numbers 33-02-02-17-476-016 and 33-02-02-17-476-024) from RA, Single-Family Medium Density Residential, to RD, Multiple-Family Residential - maximum of eight dwelling units per acre, subject to a series of conditions offered by the applicant.

OPTION 2: Denial

Move to adopt the resolution denying Ordinance 2023-06 an ordinance to rezone the property at 5010 Park Lake Road and a portion of the adjacent vacant property (Parcel ID numbers 33-02-02-17-476-016 and 33-02-02-17-476-024) from RA, Single-Family Medium Density Residential, to RD, Multiple-Family Residential - maximum of eight dwelling units per acre, subject to a series of conditions offered by the applicant.

OPTION 3: Refer to the Planning Commission

Move to refer Ordinance 2023-06 back to the Planning Commission based on the additional information raised during the Township Board's discussion.

Attachments

1. Resolution to Approve Ordinance 2023-06 for Introduction
2. Resolution to Deny Ordinance 2023-06
3. Ordinance 2023-06 - Park Lake Rezoning
4. Letter from Redwood Living, dated November 29, 2023

RESOLUTION

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 5th day of December, 2023 at 6:00 p.m., Local Time.

PRESENT: _____

ABSENT: _____

The following resolution was offered by _____ and supported by _____.

WHEREAS, Redwood Living has requested the rezoning of an approximately 8.72 acres of land on two properties, located at 5010 Park Lake Road and the vacant property to the rear, from RA, Single-Family, Medium Density Residential, to RD, Multiple Family Residential with a maximum of eight dwelling units per acre, with a series of conditions offered by the applicant; and

WHEREAS, the applicant has proposed a series of nine conditions on the site, including limiting development to a maximum of 106 dwelling units over the entire property and precluding development on the northeastern 14 acres of land; and

WHEREAS, the Planning Commission held a public hearing and discussed the rezoning at its regular meeting on September 25, 2023; and

WHEREAS, the Planning Commission further discussed the matter at their October 23, 2023 meeting and recommended denial to the Township Board; and

WHEREAS, the Township Board reviewed the matter at their November 21, 2023 Meeting, along with all of the Staff material, application information, and public comment submitted to date; and

WHEREAS, the proposed rezoning meets multiple goals of the Meridian Township 2017 Master Plan, including encouraging cluster development, providing a range of residential densities in the community, and focusing growth within the Urban Service Boundary; and

WHEREAS, the proposed rezoning conforms with the Meridian Township 2017 Master Plan’s Future Land Use map in density; and

WHEREAS, the limitations and conditions of approval offered by the applicant would restrict development on the site to a reasonable density, while preserving substantial natural features on the site.

NOW THEREFORE, BE IT RESOLVED THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN hereby INTRODUCES FOR PUBLICATION AND SUBSEQUENT ADOPTION Ordinance

**Resolution to Introduce
Ordinance 2023-06 (Park Lake Rezoning)
Page 2**

Number 2023-06, entitled "Ordinance Amending the Zoning District Map of Meridian Township pursuant to Rezoning Application #23030" from RA, Single-Family, Medium Density Residential, to RD, Multiple Family Residential with a maximum of eight dwelling units per acre, with a series of conditions offered by the applicant.

BE IT FURTHER RESOLVED that the Clerk of the Charter Township of Meridian is directed to publish the Ordinance in the form in which it is introduced at least once prior to the next regular meeting of the Township Board.

ADOPTED: YEAS: _____

NAYS: _____

STATE OF MICHIGAN)

) ss

COUNTY OF INGHAM)

I, the undersigned, the duly qualified and acting Clerk of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Township Board on the 5th day of December, 2023.

Deborah Guthrie
Township Clerk

RESOLUTION TO DENY

**Ordinance 2023-06
Park Lake Rezoning**

RESOLUTION

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 5th day of December, 2023 at 6:00 p.m., Local Time.

PRESENT: _____

ABSENT: _____

The following resolution was offered by _____ and supported by _____.

WHEREAS, Redwood Living has requested the rezoning of an approximately 8.72 acres of land on two properties, located at 5010 Park Lake Road and the vacant property to the rear, from RA, Single-Family, Medium Density Residential, to RD, Multiple Family Residential with a maximum of eight dwelling units per acre; and

WHEREAS, the applicant has proposed a series of nine conditions on the site, limiting development to a maximum of 106 dwelling units over the entire property and precluding development on the northeastern 14 acres of land; and

WHEREAS, the Planning Commission held a public hearing and discussed the rezoning at its regular meeting on September 25, 2023; and

WHEREAS, the Planning Commission further discussed the matter at their October 23, 2023 meeting and recommended denial to the Township Board; and

WHEREAS, the proposed development is not in conformance with the Future Land Use map in the 2017 Meridian Township Master Plan, which calls for single-family residential uses on the site, up to 3.5 dwelling units per acre, consistent with the surrounding neighborhood; and

WHEREAS, the current zoning of the site is consistent with the properties to the north and west of the site; and

WHEREAS, the applicant has not adequately demonstrated why the requested rezoning to Multiple Family is appropriate or why the current RA zoning is unreasonable; and

WHEREAS, the subject properties could be developed as currently zoned.

NOW THEREFORE, BE IT RESOLVED THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN hereby DENIES Ordinance 2023-06, a request to rezone the subject property from RA, Single-Family, Medium Density Residential, to RD, Multiple-Family Residential with a maximum of 8 dwelling units, subject to a series of conditions offered by the applicant.

**Resolution to Deny
Ordinance 2023-06 (Park Lake Rezoning)
Page 2**

ADOPTED: YEAS:

NAYS:

STATE OF MICHIGAN)

) ss

COUNTY OF INGHAM)

I, the undersigned, the duly qualified and acting Clerk of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Township Board on the 5th day of October, 2023.

Deborah Guthrie
Township Clerk

ORDINANCE NO. 2023-06
ORDINANCE AMENDING THE ZONING DISTRICT MAP
OF MERIDIAN TOWNSHIP
PURSUANT TO REZONING #23030

The Charter Township of Meridian ordains:

Section 1. Amending the Zoning District Map.

A. The Zoning District Map of Meridian Township, as adopted in Section 86-312 of the Code of the Charter Township of Meridian, Michigan, as previously amended, is hereby amended by changing the RA, Single-Family, Medium Density District symbol and indication as shown on the Zoning District Map, for Parcel #33-02-02-17-476-016 and a portion of Parcel #33-02-02-17-476-024, land legally described as:

A PORTION OF A PARCEL OF LAND IN THE SOUTHEAST $\frac{1}{4}$ OF SECTION 17 AND THE NORTHEAST $\frac{1}{4}$ OF SECTION 20, TOWN 4 NORTH, RANGE 1 WEST, MERIDIAN TOWNSHIP, INGHAM COUNTY, MICHIGAN, THE SURVEYED BOUNDARY OF SAID PARCEL DESCRIBED AS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 17; THENCE N00°16'29"E, ALONG THE EAST LINE OF SAID SECTION 17 A DISTANCE OF 179.53 FEET TO THE NORTHWESTERLY RIGHT-OF-WAY LINE OF CANADIAN NATIONAL RAILWAY AND THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE S53°42'56"W, ALONG SAID NORTHWESTERLY LINE 1007.48 FEET TO THE CENTERLINE OF EAST GRAND RIVER AVENUE (M~43); THENCE N77°03'29"W, ALONG SAID CENTERLINE 53.84 FEET TO THE EAST LINE OF THE WEST 450 FEET OF THE NORTHEAST $\frac{1}{4}$ OF SAID NORTHEAST $\frac{1}{4}$; THENCE N00°11'25"W, ALONG SAID EAST LINE 388.27 FEET TO THE SOUTH LINE OF SAID SECTION 17; THENCE N88°54'57"E, ALONG SAID SOUTH LINE 8.86 FEET; THENCE N00°08'03"W, 76.02 FEET; THENCE S89°34'27"W, 458.82 FEET TO THE WEST LINE OF THE SOUTHEAST $\frac{1}{4}$ OF SAID SOUTHEAST $\frac{1}{4}$; THENCE N00°08'32"W, ALONG SAID WEST LINE 224.00 FEET; THENCE N89°34'27"E, 317.80 FEET; THENCE N00°08'32"W, PARALLEL WITH SAID WEST LINE 100.00 FEET; THENCE S89°34'27"W, 317.80 FEET TO SAID WEST LINE; THENCE N00°08'32"W, ALONG SAID WEST LINE 458.77 FEET; THENCE N85°40'28"E, 382.66 FEET; THENCE N88°51'56"E, 64.72 FEET; THENCE N87°44'47"E, 245.55 FEET; THENCE S00°03'01"W, 365.10 FEET; THENCE S89°41'13"E, 628.22 FEET TO THE EAST LINE OF SECTION 17; THENCE S00°16'29"W, ALONG SAID EAST LINE OF SECTION 17 A DISTANCE OF 330.91 FEET TO THE POINT OF BEGINNING; SAID PORTION OF PARCEL CONTAINING 22.41 ACRES MORE OR LESS; SAID PORTION OF PARCEL SUBJECT TO RIGHT-OF-WAY FOR ROAD PURPOSES ALONG EAST GRAND RIVER AVENUE AND PARK LAKE ROAD; SAID PORTION OF PARCEL SUBJECT TO ALL EASEMENTS AND RESTRICTIONS IF ANY

to that of RD, Multiple-Family Residential, up to 8 dwelling units per acre, with nine conditions offered by the applicant.

Section 2. Validity and Severability. The provisions of this Ordinance are severable and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of the Ordinance.

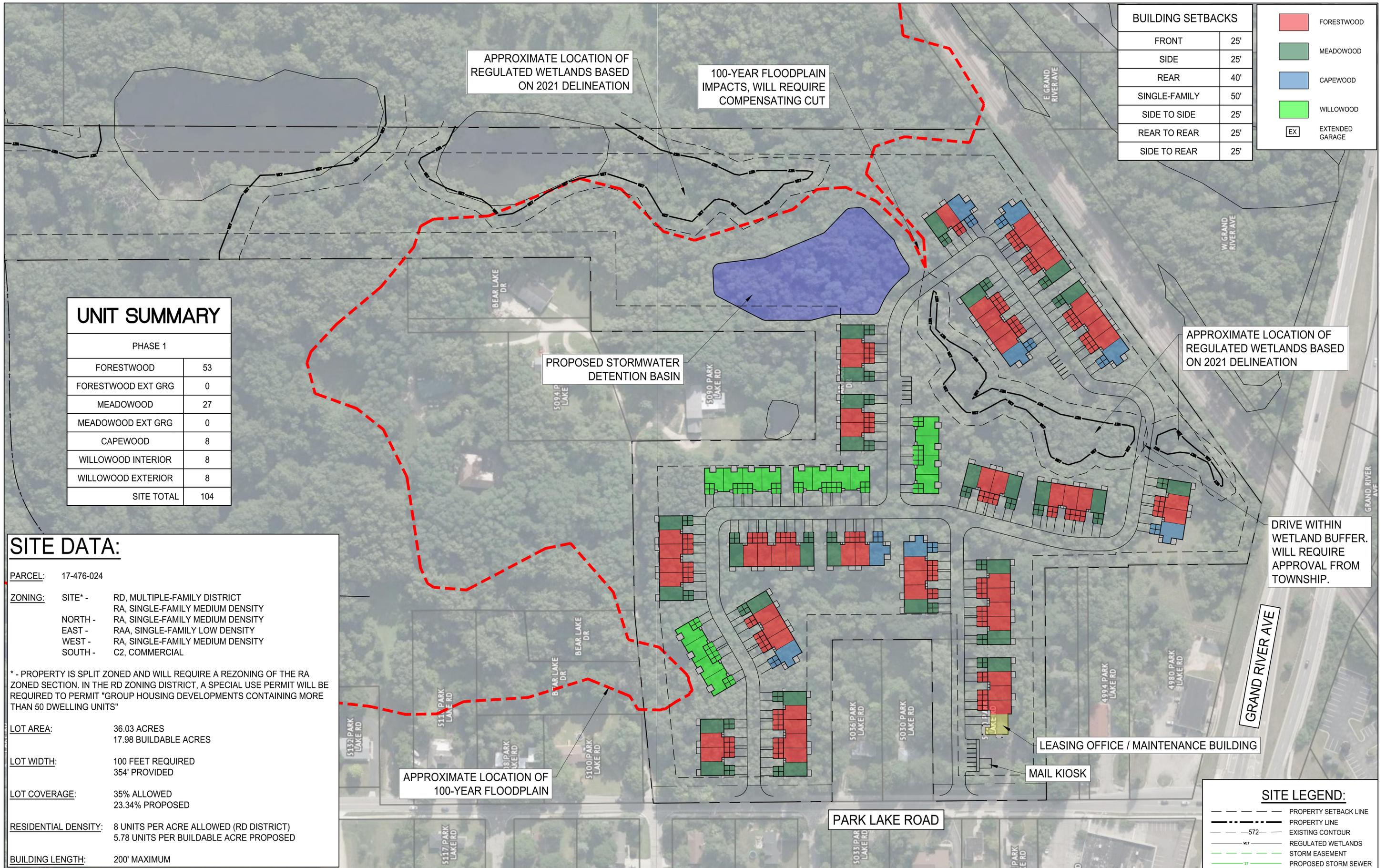
Section 3. Repealer Clause. All ordinances or parts of ordinances in conflict therewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Savings Clause. This Ordinance does not affect rights and duties matured, penalties that were incurred, and proceedings that were begun, before its effective date.

Section 5. Effective Date. This Ordinance shall be effective seven (7) days after its publication or upon such later date as may be required under Section 402 of the Michigan Zoning Enabling Act (MCL 125.3402) after filing of a notice of intent to file a petition for a referendum.

Patricia Herring Jackson, Township Supervisor

Deborah Guthrie, Township Clerk



BUILDING SETBACKS	
FRONT	25'
SIDE	25'
REAR	40'
SINGLE-FAMILY	50'
SIDE TO SIDE	25'
REAR TO REAR	25'
SIDE TO REAR	25'

[Red Box]	FORESTWOOD
[Green Box]	MEADOWOOD
[Blue Box]	CAPEWOOD
[Light Green Box]	WILLOWOOD
[EX Box]	EXTENDED GARAGE

UNIT SUMMARY	
PHASE 1	
FORESTWOOD	53
FORESTWOOD EXT GRG	0
MEADOWOOD	27
MEADOWOOD EXT GRG	0
CAPEWOOD	8
WILLOWOOD INTERIOR	8
WILLOWOOD EXTERIOR	8
SITE TOTAL	104

SITE DATA:

PARCEL: 17-476-024

ZONING: SITE* - RD, MULTIPLE-FAMILY DISTRICT
 NORTH - RA, SINGLE-FAMILY MEDIUM DENSITY
 EAST - RAA, SINGLE-FAMILY LOW DENSITY
 WEST - RA, SINGLE-FAMILY MEDIUM DENSITY
 SOUTH - C2, COMMERCIAL

* - PROPERTY IS SPLIT ZONED AND WILL REQUIRE A REZONING OF THE RA ZONED SECTION. IN THE RD ZONING DISTRICT, A SPECIAL USE PERMIT WILL BE REQUIRED TO PERMIT "GROUP HOUSING DEVELOPMENTS CONTAINING MORE THAN 50 DWELLING UNITS"

LOT AREA: 36.03 ACRES
 17.98 BUILDABLE ACRES

LOT WIDTH: 100 FEET REQUIRED
 354' PROVIDED

LOT COVERAGE: 35% ALLOWED
 23.34% PROPOSED

RESIDENTIAL DENSITY: 8 UNITS PER ACRE ALLOWED (RD DISTRICT)
 5.78 UNITS PER BUILDABLE ACRE PROPOSED

BUILDING LENGTH: 200' MAXIMUM

DRIVE WITHIN WETLAND BUFFER. WILL REQUIRE APPROVAL FROM TOWNSHIP.

SITE LEGEND:	
--- (dashed line)	PROPERTY SETBACK LINE
--- (solid line)	PROPERTY LINE
--- (dotted line)	EXISTING CONTOUR
--- (dashed line)	572
--- (dashed line)	REGULATED WETLANDS
--- (dashed line)	STORM EASEMENT
--- (dashed line)	PROPOSED STORM SEWER



7007 E. Pleasant Valley
Rd. Independence, OH
44131
(248) 930-2123 P.

November 29, 2023

To the Members of the Township Board of Trustees:

On behalf of Redwood Apartment Neighborhoods, I wanted to submit a letter to the Board responding to the discussion that occurred at the last meeting on November 21, 2023. Firstly, I sincerely appreciate the time you spent reviewing the materials we have submitted about this project and the thoughtful feedback presented at the meetings. I wanted to highlight two topics of discussion and provide a bit of extra detail on those items.

Stormwater:

There was some discussion about drainage in the area and discussion that the ICDC had not yet reviewed any plans. As we are only at the rezoning stage and a submittal to the ICDC is not typical until further along in the process, we have not formally submitted any plans to that agency. We do, however, understand that in order for any development to occur on the site the ICDC would need to review and ultimately approve a design. We have worked with Ingham County on several projects and have received approvals from their office previously.

As this is a particularly significant concern for the Township, Redwood has provided a preliminary Stormwater Management Plan for this property. The attached analysis shows that the proposed Redwood plan would *significantly reduce the drainage from the development area of the property*. As you can see in the conclusion found on page 7 of the report (Section 2.3: Stormwater Results) when considering the proposed development area, the developed drainage would be only ~20% of the current volume of water that is leaving the area via the Proctor Drain under its existing condition. By detaining water and allowing for a controlled release Redwood would be improving the drainage conditions for this parcel. This, of course, would need to be further analyzed and ultimately reviewed and approved by the Township and ICDC but we wanted to provide data to clarify this point.

In addition, as previously indicated in our submittals Redwood Apartment Neighborhoods would be willing to work with the ICDC and/or Meridian Township to explore if there is a means for the remaining undeveloped ~14 AC area to be used to further improve drainage in the area or provide some kind of formal preservation of that area.

Density:

Redwood is proposing a development of not more than 106 units on the overall ~36 AC site. This equates to an overall density of 2.94 dwelling units per acre which is in line with the Master Plan FLU designation for Residential at a density of 0.5-3.5 dwelling units per acre.

In addition, we wanted to highlight that if this property were to be developed entirely as single family under the RA District (One-Family Medium-Density) residential the permitted density would be higher than what is proposed by Redwood as it allowed up to 3.5 dwelling units per acre.

Finally, if the property were developed as currently zoned with 13.16 AC being zoned RD Multiple-Family Residential allowing (8 units per acre) the overall allowable density would be significantly higher than Redwood's proposal at up to 185 dwelling units per acre (between the RD and RA areas).



7007 E. Pleasant Valley
Rd. Independence, OH
44131
(248) 930-2123 P.

While we realize the site might not be developed to its maximum extent; the density of the proposed Redwood Neighborhood project is consistent with densities of a typical RA single family neighborhood and is generally in line with the density of the

	Max. Density Allowed	Max. Units Allowed
Redwood Proposal	2.94 du/ac	106
RD and RA (as zoned)	8 du/ac & 3.5 du/ac	185
100% RA	3.5 du/ac	126

Wardcliff neighborhood on the located across Park Lake Rd. which is built at approximately 3-3.5 units per acre.

Considering the above, in addition to the information provided previously, we believe a Redwood Neighborhood would be a natural, logical, and beneficial land use on this property and I appreciate the Township's consideration of our proposal.

Most sincerely,

A handwritten signature in cursive script that reads "Emily Engelhart".

Emily Engelhart
Director of Acquisitions
Redwood Living

Stormwater Management Plan

Redwood, Meridian Township, Michigan

Park Lake Road, Meridian Township, Michigan



Colliers Engineering and Design

Office: Lansing, Michigan
7050 West Saginaw Highway, Suite 200
Lansing, MI 48917

Phone: 517.272.9835

Email: ian.graham@collierseng.com

www.collierseng.com

TABLE OF CONTENTS

1.0	Site Description	3
1.1	Site Zoning	3
1.2	Existing Conditions	4
1.3	Existing Soils	5
2.0	Basis for Design	7
2.1	Design Background.....	7
2.2	Stormwater Analysis.....	7
2.3	Stormwater Results.....	7
2.4	Water Quality.....	7
2.5	Stormwater Outlet/overflow.....	7

Appendix A – Zoning Map

Appendix B – Soil Information

Appendix C – Pre-Developed Drainage Conditions

Appendix D – Stormwater Calculations

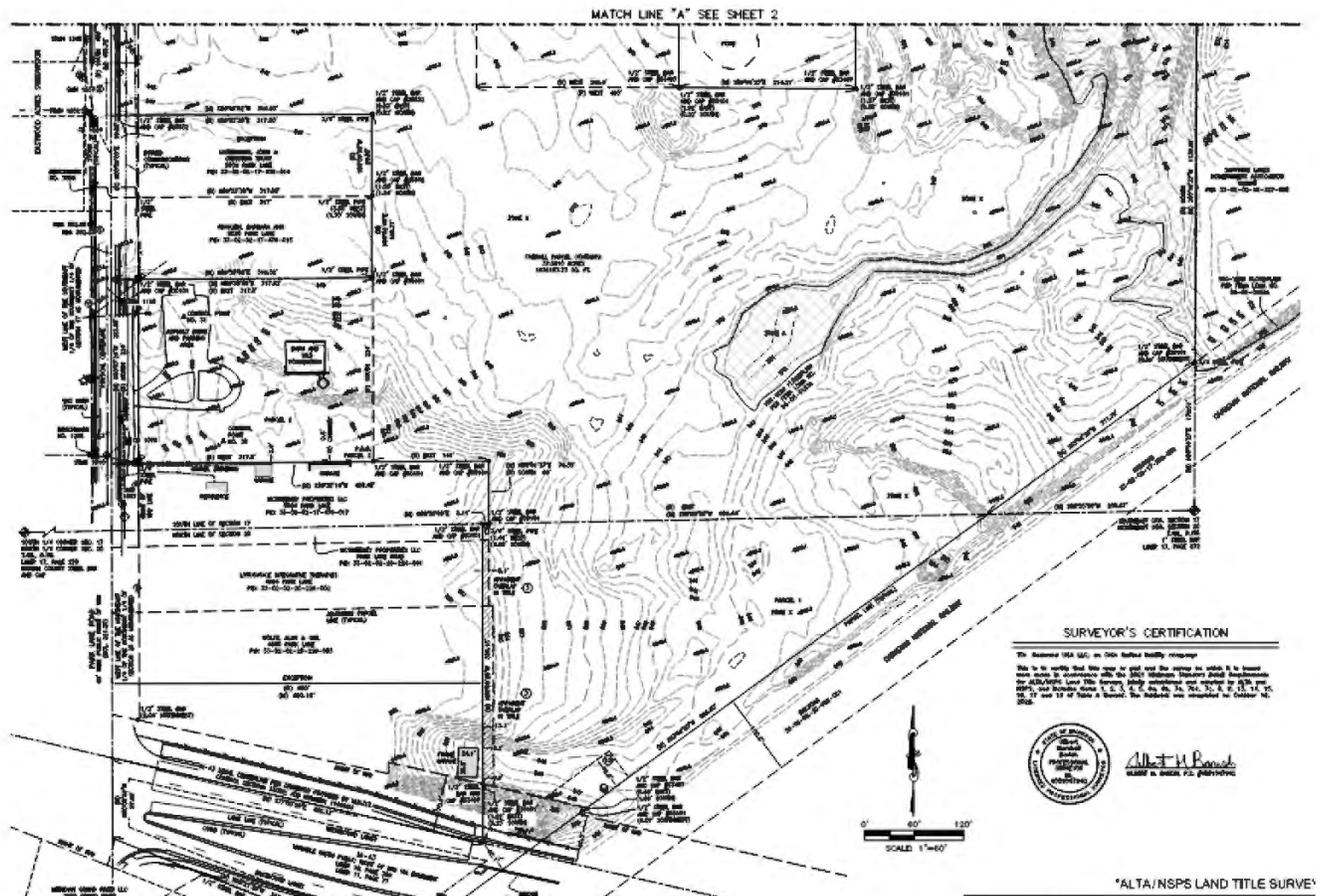
In accordance with the Ingham County Drain Commissioner’s Office, this document represents information and calculations to support the sizing of the stormwater management systems for the proposed Redwood neighborhood in Meridian Township, County of Ingham, Michigan.

1.0 Site Description

1.1 SITE ZONING

The proposed site is located along Park Lake Road north of Grand River Ave (M-43) in Meridian Township, Michigan. The site is approximately ±37.5610 acres and is split zoned RD, Multiple-Family and RA, Single-Family.

Figure 1 – ALTA Survey



The property adjacent and to the south is commercial. The east adjacent property is railroad and multiple-family. The north adjacent property is single-family residential. The property to the west is commercial, office, and single-family. A copy of the Meridian Township zoning map can be found in the Appendices.

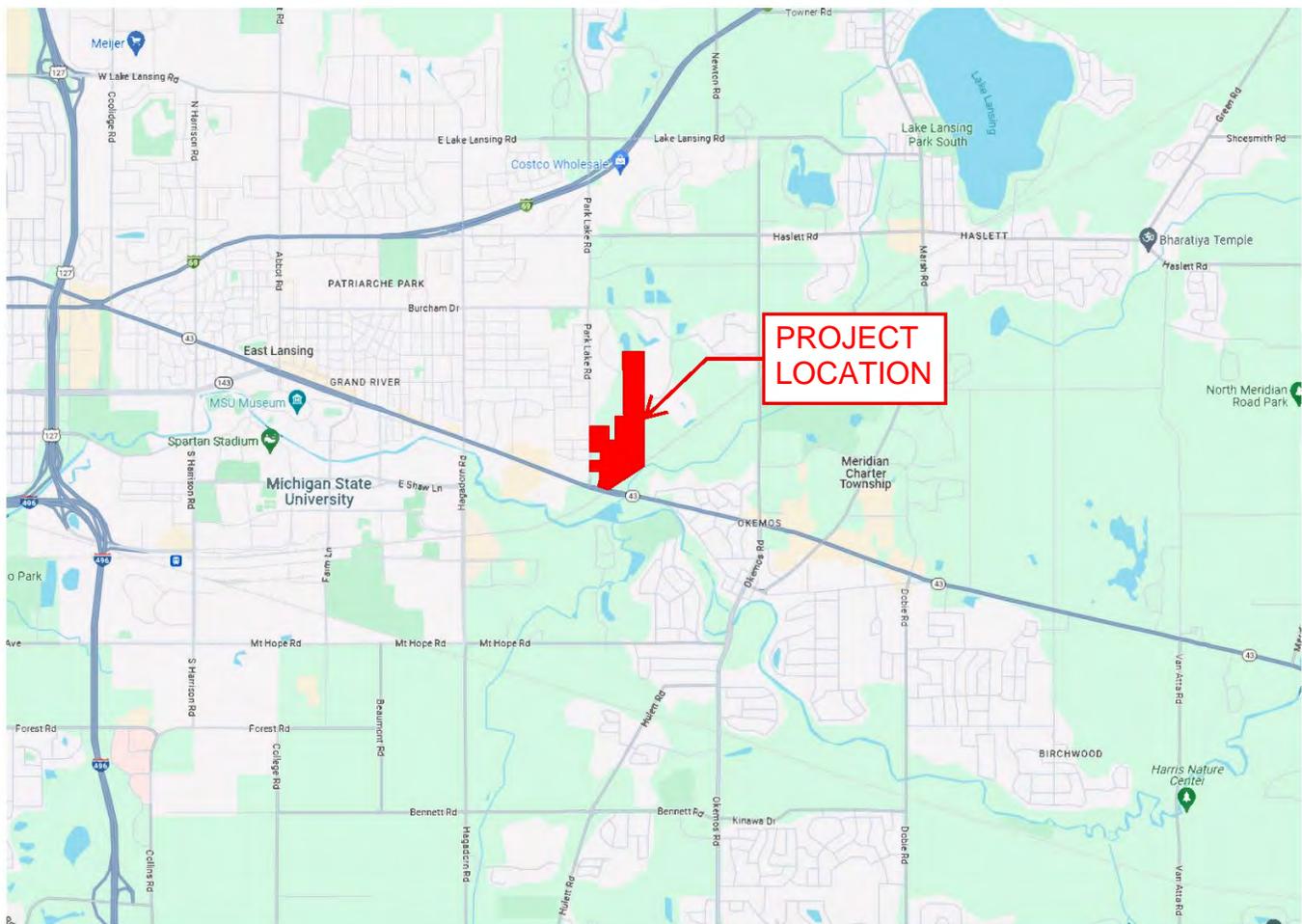
1.2 EXISTING CONDITIONS

The existing site mainly consists of wooded vegetation with an existing building in the near Park Lake Road. Wetlands have been verified by the Township’s wetland consultant, these wetlands are assumed to be regulated by the State of Michigan (EGLE). The site contains 100-year floodplain at elevation 842.50 per a completed FEMA LOMA #04-05-0153A. The site topography ranges from an elevation of 864 near Park Lake Road to 830.4 in the pond located within the floodplain area on the east edge of the property.

The existing drainage patterns of the property and adjacent parcels currently drain to four (4) outfall locations;

- Existing Drainage Area #1 = 0.73 acres outfalls to the Park Lake right-of-way
- Existing Drainage Area #2 = 6.35 acres does not have an outlet and is retained in a low spot on the property
- Existing Drainage Area #3 = 1.50 acres outfalls to the north offsite to the 100-year floodplain
- Existing Drainage Area #4 = 16.28 acres outfalls to the east to the 100-year floodplain and ultimately the Proctor Drain (Ingham County)
- The remainder of the property, mostly the northern ~14 acres, are to be undisturbed therefore are not included in the stormwater calculations.

Figure 2 – Vicinity Map



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BrB	Boyer sandy loam, 0 to 6 percent slopes	A	15.3	5.9%
ByA	Brady sandy loam, 0 to 3 percent slopes	B	0.0	0.0%
Ce	Ceresco fine sandy loam	A/D	2.3	0.9%
Co	Colwood-Brookston loams	C/D	38.5	14.9%
HgtahA	Houghton muck, 0 to 1 percent slopes	A/D	28.1	10.9%
KbA	Kibbie loam, 0 to 3 percent slopes	B/D	6.3	2.4%
MaB	Marlette fine sandy loam, 2 to 6 percent slopes	C/D	1.0	0.4%
OtB	Oshtemo-Spinks loamy sands, 0 to 6 percent slopes	A	5.2	2.0%
OwB	Owosso-Marlette sandy loams, 2 to 6 percent slopes	C	5.8	2.2%
OwC	Owosso-Marlette sandy loams, 6 to 12 percent slopes	C	16.3	6.3%
Pt	Pits		11.6	4.5%
Ud	Udorthents and Udipsamments		9.4	3.6%
UeB	Urban land-Boyer-Spinks complex, 0 to 10 percent slopes	A	43.1	16.6%
UpA	Urban land-Capac-Colwood complex, 0 to 4 percent slopes	C/D	21.0	8.1%
UtB	Urban land-Marlette complex, 2 to 12 percent slopes		47.3	18.3%
W	Water		7.7	3.0%
Totals for Area of Interest			258.9	100.0%

2.0 Basis for Design

2.1 DESIGN BACKGROUND

The onsite stormwater sewer and detention systems are designed in accordance with the Ingham County Drain Commissioner's (ICDC) standards. Specifically, the stormwater basins are to be sized to control the difference in peak discharge for the 2-year, 24-hour and 100-year storm events. All onsite storm sewers are to be sized for the 10-year storm event per ICDC requirements. The stormwater basins have also been designed to accommodate the 1-inch Water Quality storm event by holding the said volume and releasing it at a minimum 24 hour time period.

2.2 STORMWATER ANALYSIS

The TR-55 stormwater modeling program HydroCAD was used for pond sizing and discharge analysis. The drainage areas were delineated based on the land use and soil classifications. A copy of the existing drainage area map can be found in the appendix.

2.3 STORMWATER RESULTS

Stormwater detention basins are to be designed to accommodate the 100-year storm event with a minimum of 12-inches of freeboard. Per Section 3 in the ICDC standards manual for Detention and Retention Systems, stormwater must be restricted to a pre-developed flow rate of 0.15 cubic feet per second per acre (cfs/acre). As the ultimate outfall point for the site is the 100-year floodplain to the east, using the Existing Drainage Area #4 as the pre-developed flow rate restriction the site is limited to a release rate of 2.45 cfs for the 100-year storm event. Pre-developed conditions currently discharge 11.89 cfs during a 100-year event. The end result shows Redwood will decrease the stormwater discharge by at least 9.44 cfs during a 100-year event, a reduction of 80%.

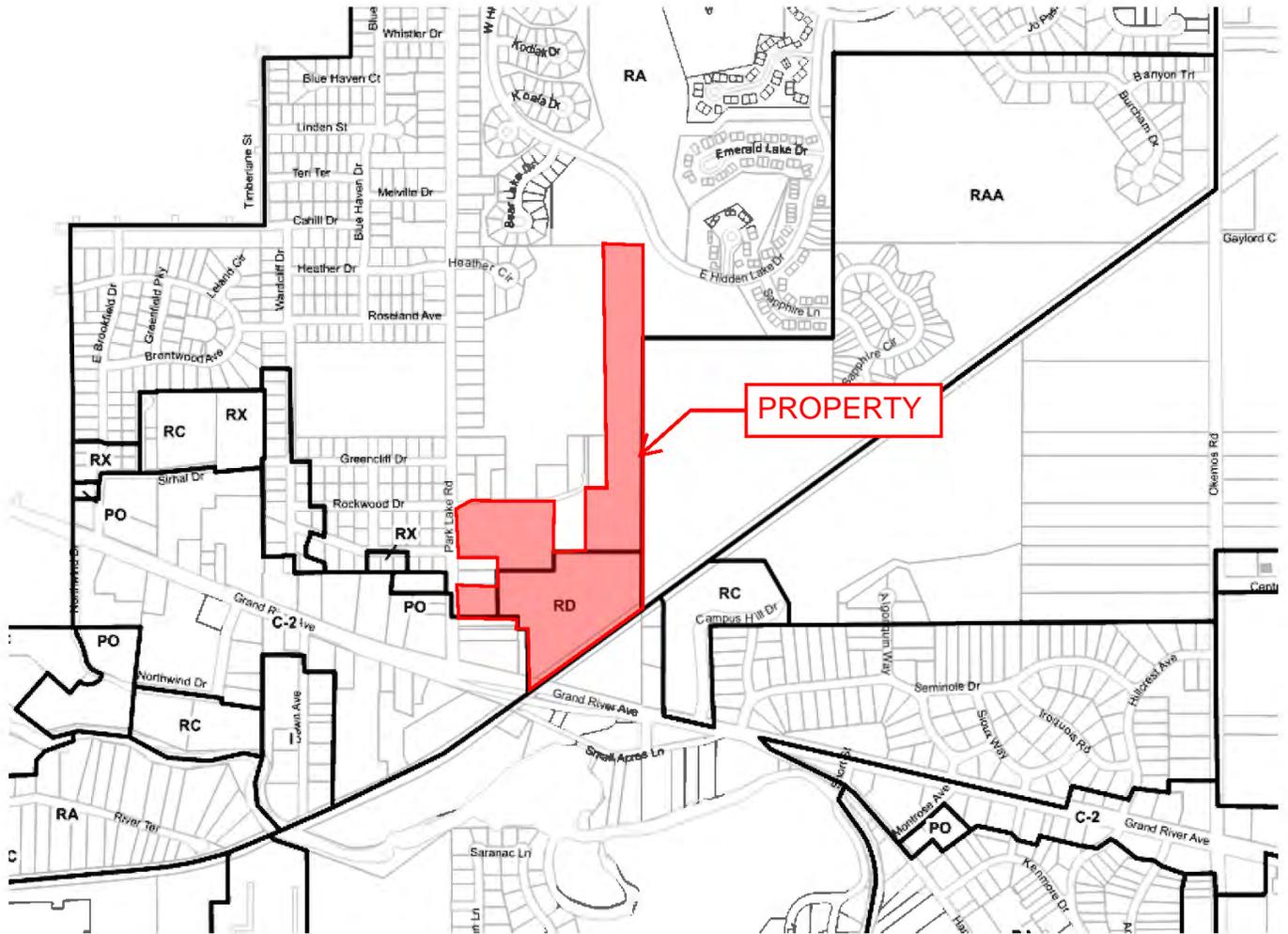
2.4 WATER QUALITY

Based on the ICDC requirements, the first flush volume from impervious surfaces must be contained within an infiltration or extended detention basin. The first flush volume has been designed to be detained a minimum of 24 hours prior to discharge to allow for settlement of suspended solids. Calculations supporting the sizing of the discharge can be found in Appendix E.

2.5 STORMWATER OUTLET/OVERFLOW

Stormwater detention basins are to be designed to detain the entire 100-year storm event and discharge at the predeveloped rate. In addition, an emergency overflow is to be designed so that the basin do not overtop for larger stormwater events. The elevation of the weir will be set at the 100-year stormwater elevation to ensure that no water will leave the site.

Appendix A – Zoning Map



Appendix B – Soil Information

MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points

-  A
-  A/D
-  B
-  B/D

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

C
 C

C/D
 C/D

D
 D

Not rated or not available
 Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ingham County, Michigan
 Survey Area Data: Version 21, Aug 25, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 9, 2022—Oct 28, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BrB	Boyer sandy loam, 0 to 6 percent slopes	A	15.3	5.9%
ByA	Brady sandy loam, 0 to 3 percent slopes	B	0.0	0.0%
Ce	Ceresco fine sandy loam	A/D	2.3	0.9%
Co	Colwood-Brookston loams	C/D	38.5	14.9%
HgtahA	Houghton muck, 0 to 1 percent slopes	A/D	28.1	10.9%
KbA	Kibbie loam, 0 to 3 percent slopes	B/D	6.3	2.4%
MaB	Marlette fine sandy loam, 2 to 6 percent slopes	C/D	1.0	0.4%
OtB	Oshtemo-Spinks loamy sands, 0 to 6 percent slopes	A	5.2	2.0%
OwB	Owosso-Marlette sandy loams, 2 to 6 percent slopes	C	5.8	2.2%
OwC	Owosso-Marlette sandy loams, 6 to 12 percent slopes	C	16.3	6.3%
Pt	Pits		11.6	4.5%
Ud	Udorthents and Udipsamments		9.4	3.6%
UeB	Urban land-Boyer-Spinks complex, 0 to 10 percent slopes	A	43.1	16.6%
UpA	Urban land-Capac-Colwood complex, 0 to 4 percent slopes	C/D	21.0	8.1%
UtB	Urban land-Marlette complex, 2 to 12 percent slopes		47.3	18.3%
W	Water		7.7	3.0%
Totals for Area of Interest			258.9	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C – Pre-Developed Drainage Conditions

Appendix D – Stormwater Calculations



EX #1



EX #2



EX #3



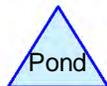
EX #4



Redwood



Detention Pond



Routing Diagram for RedwoodMeridian

Prepared by Colliers Engineering & Design, Printed 11/29/2023
HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 5241 MI Ingham

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type II 24-hr		Default	24.00	1	2.41	2
2	100-Year	Type II 24-hr		Default	24.00	1	5.46	2
3	WQ	Type II 24-hr		Default	24.00	1	1.00	2

RedwoodMeridian

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
9.460	74	>75% Grass cover, Good, HSG C (5S)
14.141	98	Paved parking, HSG C (5S)
24.860	60	Woods, Fair, HSG B (1S, 2S, 3S, 4S)
48.461	74	TOTAL AREA

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
24.860	HSG B	1S, 2S, 3S, 4S
23.601	HSG C	5S
0.000	HSG D	
0.000	Other	
48.461		TOTAL AREA

RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Printed 11/29/2023

Page 6

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	9.460	0.000	0.000	9.460	>75% Grass cover, Good	5S
0.000	0.000	14.141	0.000	0.000	14.141	Paved parking	5S
0.000	24.860	0.000	0.000	0.000	24.860	Woods, Fair	1S, 2S, 3S, 4S
0.000	24.860	23.601	0.000	0.000	48.461	TOTAL AREA	

RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Printed 11/29/2023

Page 7

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	6P	846.00	845.70	50.0	0.0060	0.012	0.0	12.0	0.0

RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Type II 24-hr 2-Year Rainfall=2.41"

Printed 11/29/2023

Page 8

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX #1 Runoff Area=0.730 ac 0.00% Impervious Runoff Depth>0.15"
Flow Length=260' Slope=0.0300 '/ Tc=45.1 min CN=60 Runoff=0.02 cfs 0.009 af

Subcatchment 2S: EX #2 Runoff Area=6.350 ac 0.00% Impervious Runoff Depth>0.14"
Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=0.18 cfs 0.076 af

Subcatchment 3S: EX #3 Runoff Area=1.500 ac 0.00% Impervious Runoff Depth>0.14"
Flow Length=380' Slope=0.0200 '/ Tc=61.4 min CN=60 Runoff=0.04 cfs 0.018 af

Subcatchment 4S: EX #4 Runoff Area=16.280 ac 0.00% Impervious Runoff Depth>0.14"
Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=0.46 cfs 0.194 af

Subcatchment 5S: Redwood Runoff Area=23.601 ac 59.92% Impervious Runoff Depth>1.30"
Tc=10.0 min CN=88 Runoff=46.57 cfs 2.560 af

Pond 6P: Detention Pond Peak Elev=843.31' Storage=96,782 cf Inflow=46.57 cfs 2.560 af
Discarded=0.35 cfs 0.338 af Primary=0.00 cfs 0.000 af Outflow=0.35 cfs 0.338 af

Total Runoff Area = 48.461 ac Runoff Volume = 2.857 af Average Runoff Depth = 0.71"
70.82% Pervious = 34.320 ac 29.18% Impervious = 14.141 ac

Summary for Subcatchment 1S: EX #1

Runoff = 0.02 cfs @ 12.75 hrs, Volume= 0.009 af, Depth> 0.15"

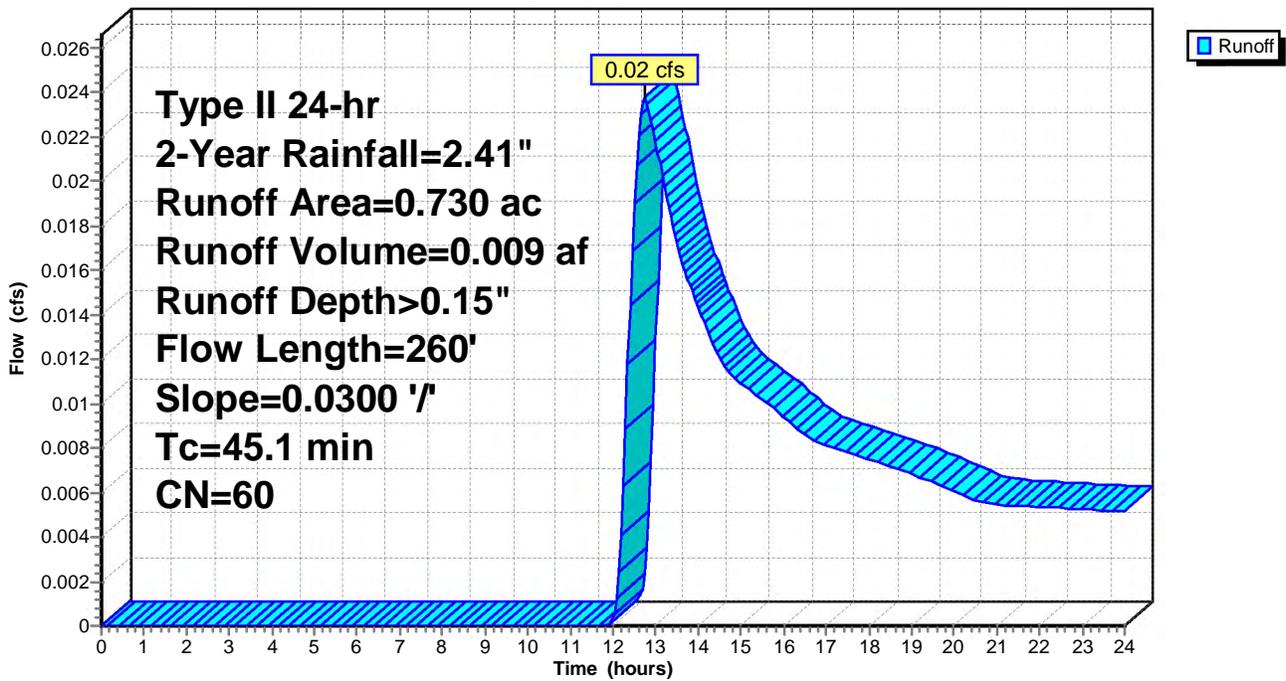
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-Year Rainfall=2.41"

Area (ac)	CN	Description
0.730	60	Woods, Fair, HSG B
0.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.1	260	0.0300	0.10		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"

Subcatchment 1S: EX #1

Hydrograph



Hydrograph for Subcatchment 1S: EX #1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	1.93	0.05	0.02
0.25	0.01	0.00	0.00	13.75	1.95	0.05	0.02
0.50	0.01	0.00	0.00	14.00	1.98	0.06	0.01
0.75	0.02	0.00	0.00	14.25	2.00	0.06	0.01
1.00	0.03	0.00	0.00	14.50	2.02	0.06	0.01
1.25	0.03	0.00	0.00	14.75	2.04	0.07	0.01
1.50	0.04	0.00	0.00	15.00	2.06	0.07	0.01
1.75	0.05	0.00	0.00	15.25	2.07	0.07	0.01
2.00	0.05	0.00	0.00	15.50	2.09	0.08	0.01
2.25	0.06	0.00	0.00	15.75	2.11	0.08	0.01
2.50	0.07	0.00	0.00	16.00	2.12	0.08	0.01
2.75	0.08	0.00	0.00	16.25	2.13	0.09	0.01
3.00	0.08	0.00	0.00	16.50	2.15	0.09	0.01
3.25	0.09	0.00	0.00	16.75	2.16	0.09	0.01
3.50	0.10	0.00	0.00	17.00	2.17	0.09	0.01
3.75	0.11	0.00	0.00	17.25	2.19	0.10	0.01
4.00	0.12	0.00	0.00	17.50	2.20	0.10	0.01
4.25	0.12	0.00	0.00	17.75	2.21	0.10	0.01
4.50	0.13	0.00	0.00	18.00	2.22	0.10	0.01
4.75	0.14	0.00	0.00	18.25	2.23	0.11	0.01
5.00	0.15	0.00	0.00	18.50	2.24	0.11	0.01
5.25	0.16	0.00	0.00	18.75	2.25	0.11	0.01
5.50	0.17	0.00	0.00	19.00	2.26	0.11	0.01
5.75	0.18	0.00	0.00	19.25	2.27	0.12	0.01
6.00	0.19	0.00	0.00	19.50	2.28	0.12	0.01
6.25	0.20	0.00	0.00	19.75	2.29	0.12	0.01
6.50	0.22	0.00	0.00	20.00	2.29	0.12	0.01
6.75	0.23	0.00	0.00	20.25	2.30	0.12	0.01
7.00	0.24	0.00	0.00	20.50	2.31	0.12	0.01
7.25	0.25	0.00	0.00	20.75	2.32	0.13	0.01
7.50	0.26	0.00	0.00	21.00	2.33	0.13	0.01
7.75	0.28	0.00	0.00	21.25	2.33	0.13	0.01
8.00	0.29	0.00	0.00	21.50	2.34	0.13	0.01
8.25	0.30	0.00	0.00	21.75	2.35	0.13	0.01
8.50	0.32	0.00	0.00	22.00	2.35	0.14	0.01
8.75	0.34	0.00	0.00	22.25	2.36	0.14	0.01
9.00	0.35	0.00	0.00	22.50	2.37	0.14	0.01
9.25	0.37	0.00	0.00	22.75	2.38	0.14	0.01
9.50	0.39	0.00	0.00	23.00	2.38	0.14	0.01
9.75	0.41	0.00	0.00	23.25	2.39	0.14	0.01
10.00	0.44	0.00	0.00	23.50	2.40	0.15	0.01
10.25	0.46	0.00	0.00	23.75	2.40	0.15	0.01
10.50	0.49	0.00	0.00	24.00	2.41	0.15	0.01
10.75	0.53	0.00	0.00				
11.00	0.57	0.00	0.00				
11.25	0.62	0.00	0.00				
11.50	0.68	0.00	0.00				
11.75	0.93	0.00	0.00				
12.00	1.60	0.01	0.00				
12.25	1.70	0.02	0.01				
12.50	1.77	0.03	0.02				
12.75	1.82	0.03	0.02				
13.00	1.86	0.04	0.02				
13.25	1.90	0.04	0.02				

Summary for Subcatchment 2S: EX #2

Runoff = 0.18 cfs @ 13.04 hrs, Volume= 0.076 af, Depth> 0.14"

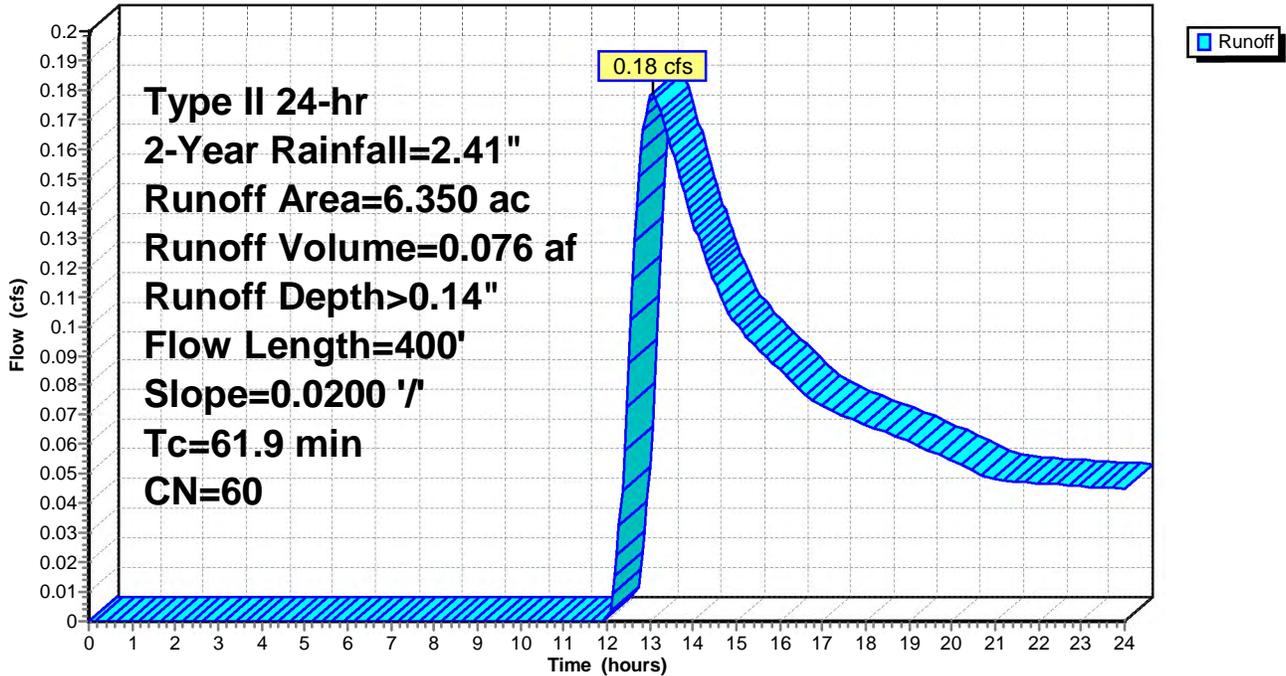
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-Year Rainfall=2.41"

Area (ac)	CN	Description
6.350	60	Woods, Fair, HSG B
6.350		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 2S: EX #2

Hydrograph



Hydrograph for Subcatchment 2S: EX #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	1.93	0.05	0.16
0.25	0.01	0.00	0.00	13.75	1.95	0.05	0.15
0.50	0.01	0.00	0.00	14.00	1.98	0.06	0.14
0.75	0.02	0.00	0.00	14.25	2.00	0.06	0.12
1.00	0.03	0.00	0.00	14.50	2.02	0.06	0.11
1.25	0.03	0.00	0.00	14.75	2.04	0.07	0.11
1.50	0.04	0.00	0.00	15.00	2.06	0.07	0.10
1.75	0.05	0.00	0.00	15.25	2.07	0.07	0.10
2.00	0.05	0.00	0.00	15.50	2.09	0.08	0.09
2.25	0.06	0.00	0.00	15.75	2.11	0.08	0.09
2.50	0.07	0.00	0.00	16.00	2.12	0.08	0.09
2.75	0.08	0.00	0.00	16.25	2.13	0.09	0.08
3.00	0.08	0.00	0.00	16.50	2.15	0.09	0.08
3.25	0.09	0.00	0.00	16.75	2.16	0.09	0.08
3.50	0.10	0.00	0.00	17.00	2.17	0.09	0.07
3.75	0.11	0.00	0.00	17.25	2.19	0.10	0.07
4.00	0.12	0.00	0.00	17.50	2.20	0.10	0.07
4.25	0.12	0.00	0.00	17.75	2.21	0.10	0.07
4.50	0.13	0.00	0.00	18.00	2.22	0.10	0.07
4.75	0.14	0.00	0.00	18.25	2.23	0.11	0.07
5.00	0.15	0.00	0.00	18.50	2.24	0.11	0.06
5.25	0.16	0.00	0.00	18.75	2.25	0.11	0.06
5.50	0.17	0.00	0.00	19.00	2.26	0.11	0.06
5.75	0.18	0.00	0.00	19.25	2.27	0.12	0.06
6.00	0.19	0.00	0.00	19.50	2.28	0.12	0.06
6.25	0.20	0.00	0.00	19.75	2.29	0.12	0.06
6.50	0.22	0.00	0.00	20.00	2.29	0.12	0.05
6.75	0.23	0.00	0.00	20.25	2.30	0.12	0.05
7.00	0.24	0.00	0.00	20.50	2.31	0.12	0.05
7.25	0.25	0.00	0.00	20.75	2.32	0.13	0.05
7.50	0.26	0.00	0.00	21.00	2.33	0.13	0.05
7.75	0.28	0.00	0.00	21.25	2.33	0.13	0.05
8.00	0.29	0.00	0.00	21.50	2.34	0.13	0.05
8.25	0.30	0.00	0.00	21.75	2.35	0.13	0.05
8.50	0.32	0.00	0.00	22.00	2.35	0.14	0.05
8.75	0.34	0.00	0.00	22.25	2.36	0.14	0.05
9.00	0.35	0.00	0.00	22.50	2.37	0.14	0.05
9.25	0.37	0.00	0.00	22.75	2.38	0.14	0.05
9.50	0.39	0.00	0.00	23.00	2.38	0.14	0.05
9.75	0.41	0.00	0.00	23.25	2.39	0.14	0.05
10.00	0.44	0.00	0.00	23.50	2.40	0.15	0.05
10.25	0.46	0.00	0.00	23.75	2.40	0.15	0.05
10.50	0.49	0.00	0.00	24.00	2.41	0.15	0.04
10.75	0.53	0.00	0.00				
11.00	0.57	0.00	0.00				
11.25	0.62	0.00	0.00				
11.50	0.68	0.00	0.00				
11.75	0.93	0.00	0.00				
12.00	1.60	0.01	0.00				
12.25	1.70	0.02	0.02				
12.50	1.77	0.03	0.09				
12.75	1.82	0.03	0.15				
13.00	1.86	0.04	0.18				
13.25	1.90	0.04	0.17				

Summary for Subcatchment 3S: EX #3

Runoff = 0.04 cfs @ 13.04 hrs, Volume= 0.018 af, Depth> 0.14"

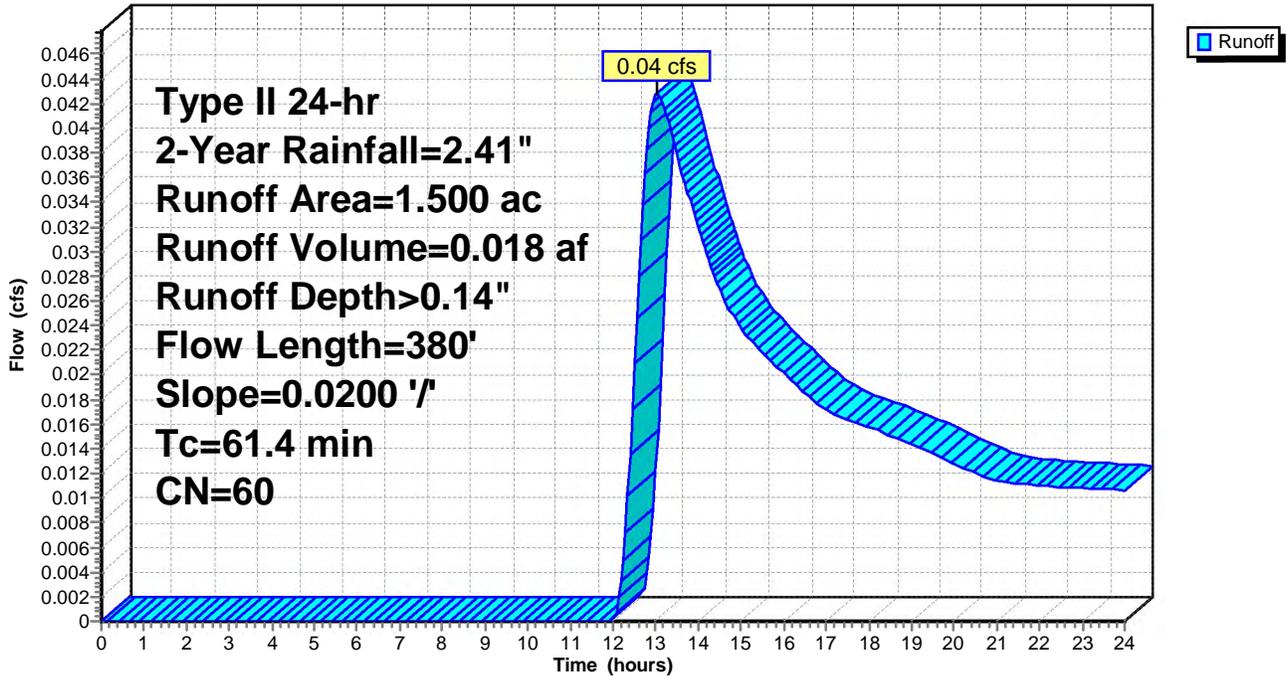
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-Year Rainfall=2.41"

Area (ac)	CN	Description
1.500	60	Woods, Fair, HSG B
1.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
1.9	80	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.4	380	Total			

Subcatchment 3S: EX #3

Hydrograph



Hydrograph for Subcatchment 3S: EX #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	1.93	0.05	0.04
0.25	0.01	0.00	0.00	13.75	1.95	0.05	0.03
0.50	0.01	0.00	0.00	14.00	1.98	0.06	0.03
0.75	0.02	0.00	0.00	14.25	2.00	0.06	0.03
1.00	0.03	0.00	0.00	14.50	2.02	0.06	0.03
1.25	0.03	0.00	0.00	14.75	2.04	0.07	0.03
1.50	0.04	0.00	0.00	15.00	2.06	0.07	0.02
1.75	0.05	0.00	0.00	15.25	2.07	0.07	0.02
2.00	0.05	0.00	0.00	15.50	2.09	0.08	0.02
2.25	0.06	0.00	0.00	15.75	2.11	0.08	0.02
2.50	0.07	0.00	0.00	16.00	2.12	0.08	0.02
2.75	0.08	0.00	0.00	16.25	2.13	0.09	0.02
3.00	0.08	0.00	0.00	16.50	2.15	0.09	0.02
3.25	0.09	0.00	0.00	16.75	2.16	0.09	0.02
3.50	0.10	0.00	0.00	17.00	2.17	0.09	0.02
3.75	0.11	0.00	0.00	17.25	2.19	0.10	0.02
4.00	0.12	0.00	0.00	17.50	2.20	0.10	0.02
4.25	0.12	0.00	0.00	17.75	2.21	0.10	0.02
4.50	0.13	0.00	0.00	18.00	2.22	0.10	0.02
4.75	0.14	0.00	0.00	18.25	2.23	0.11	0.02
5.00	0.15	0.00	0.00	18.50	2.24	0.11	0.02
5.25	0.16	0.00	0.00	18.75	2.25	0.11	0.01
5.50	0.17	0.00	0.00	19.00	2.26	0.11	0.01
5.75	0.18	0.00	0.00	19.25	2.27	0.12	0.01
6.00	0.19	0.00	0.00	19.50	2.28	0.12	0.01
6.25	0.20	0.00	0.00	19.75	2.29	0.12	0.01
6.50	0.22	0.00	0.00	20.00	2.29	0.12	0.01
6.75	0.23	0.00	0.00	20.25	2.30	0.12	0.01
7.00	0.24	0.00	0.00	20.50	2.31	0.12	0.01
7.25	0.25	0.00	0.00	20.75	2.32	0.13	0.01
7.50	0.26	0.00	0.00	21.00	2.33	0.13	0.01
7.75	0.28	0.00	0.00	21.25	2.33	0.13	0.01
8.00	0.29	0.00	0.00	21.50	2.34	0.13	0.01
8.25	0.30	0.00	0.00	21.75	2.35	0.13	0.01
8.50	0.32	0.00	0.00	22.00	2.35	0.14	0.01
8.75	0.34	0.00	0.00	22.25	2.36	0.14	0.01
9.00	0.35	0.00	0.00	22.50	2.37	0.14	0.01
9.25	0.37	0.00	0.00	22.75	2.38	0.14	0.01
9.50	0.39	0.00	0.00	23.00	2.38	0.14	0.01
9.75	0.41	0.00	0.00	23.25	2.39	0.14	0.01
10.00	0.44	0.00	0.00	23.50	2.40	0.15	0.01
10.25	0.46	0.00	0.00	23.75	2.40	0.15	0.01
10.50	0.49	0.00	0.00	24.00	2.41	0.15	0.01
10.75	0.53	0.00	0.00				
11.00	0.57	0.00	0.00				
11.25	0.62	0.00	0.00				
11.50	0.68	0.00	0.00				
11.75	0.93	0.00	0.00				
12.00	1.60	0.01	0.00				
12.25	1.70	0.02	0.01				
12.50	1.77	0.03	0.02				
12.75	1.82	0.03	0.04				
13.00	1.86	0.04	0.04				
13.25	1.90	0.04	0.04				

Summary for Subcatchment 4S: EX #4

Runoff = 0.46 cfs @ 13.04 hrs, Volume= 0.194 af, Depth> 0.14"

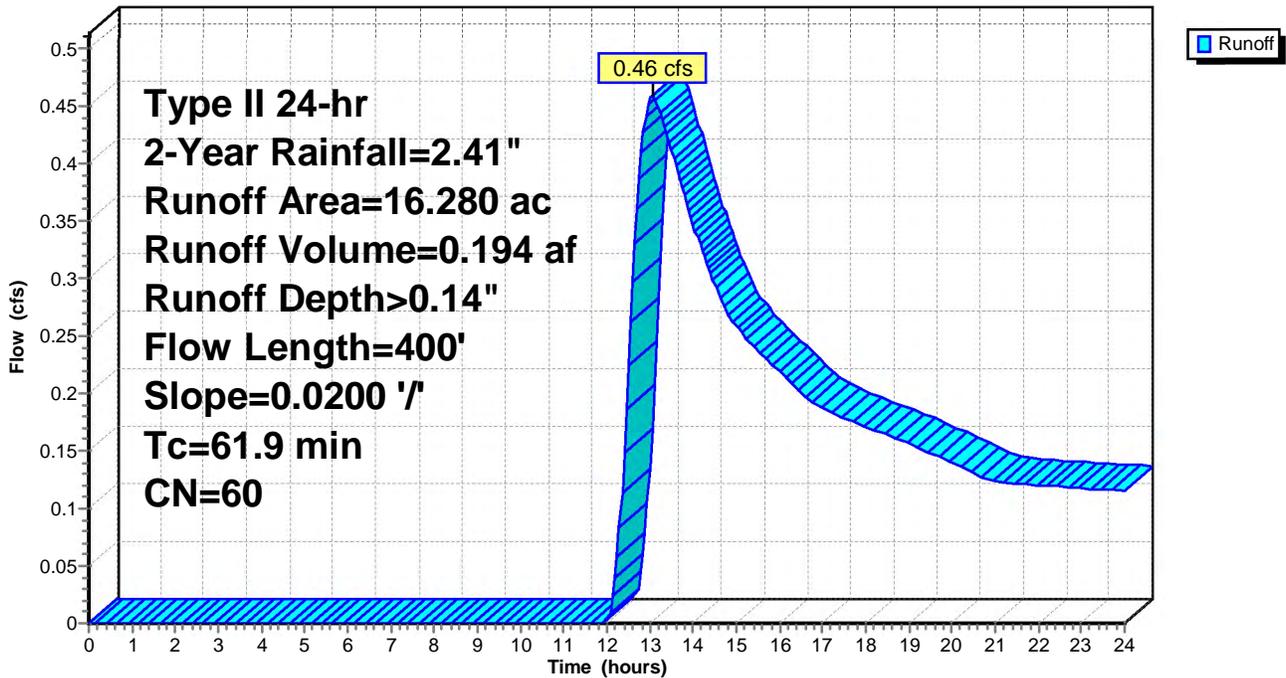
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-Year Rainfall=2.41"

Area (ac)	CN	Description
16.280	60	Woods, Fair, HSG B
16.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 4S: EX #4

Hydrograph



Hydrograph for Subcatchment 4S: EX #4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	1.93	0.05	0.41
0.25	0.01	0.00	0.00	13.75	1.95	0.05	0.38
0.50	0.01	0.00	0.00	14.00	1.98	0.06	0.35
0.75	0.02	0.00	0.00	14.25	2.00	0.06	0.32
1.00	0.03	0.00	0.00	14.50	2.02	0.06	0.29
1.25	0.03	0.00	0.00	14.75	2.04	0.07	0.27
1.50	0.04	0.00	0.00	15.00	2.06	0.07	0.26
1.75	0.05	0.00	0.00	15.25	2.07	0.07	0.25
2.00	0.05	0.00	0.00	15.50	2.09	0.08	0.24
2.25	0.06	0.00	0.00	15.75	2.11	0.08	0.23
2.50	0.07	0.00	0.00	16.00	2.12	0.08	0.22
2.75	0.08	0.00	0.00	16.25	2.13	0.09	0.21
3.00	0.08	0.00	0.00	16.50	2.15	0.09	0.20
3.25	0.09	0.00	0.00	16.75	2.16	0.09	0.19
3.50	0.10	0.00	0.00	17.00	2.17	0.09	0.19
3.75	0.11	0.00	0.00	17.25	2.19	0.10	0.18
4.00	0.12	0.00	0.00	17.50	2.20	0.10	0.18
4.25	0.12	0.00	0.00	17.75	2.21	0.10	0.17
4.50	0.13	0.00	0.00	18.00	2.22	0.10	0.17
4.75	0.14	0.00	0.00	18.25	2.23	0.11	0.17
5.00	0.15	0.00	0.00	18.50	2.24	0.11	0.16
5.25	0.16	0.00	0.00	18.75	2.25	0.11	0.16
5.50	0.17	0.00	0.00	19.00	2.26	0.11	0.16
5.75	0.18	0.00	0.00	19.25	2.27	0.12	0.15
6.00	0.19	0.00	0.00	19.50	2.28	0.12	0.15
6.25	0.20	0.00	0.00	19.75	2.29	0.12	0.14
6.50	0.22	0.00	0.00	20.00	2.29	0.12	0.14
6.75	0.23	0.00	0.00	20.25	2.30	0.12	0.13
7.00	0.24	0.00	0.00	20.50	2.31	0.12	0.13
7.25	0.25	0.00	0.00	20.75	2.32	0.13	0.13
7.50	0.26	0.00	0.00	21.00	2.33	0.13	0.12
7.75	0.28	0.00	0.00	21.25	2.33	0.13	0.12
8.00	0.29	0.00	0.00	21.50	2.34	0.13	0.12
8.25	0.30	0.00	0.00	21.75	2.35	0.13	0.12
8.50	0.32	0.00	0.00	22.00	2.35	0.14	0.12
8.75	0.34	0.00	0.00	22.25	2.36	0.14	0.12
9.00	0.35	0.00	0.00	22.50	2.37	0.14	0.12
9.25	0.37	0.00	0.00	22.75	2.38	0.14	0.12
9.50	0.39	0.00	0.00	23.00	2.38	0.14	0.12
9.75	0.41	0.00	0.00	23.25	2.39	0.14	0.12
10.00	0.44	0.00	0.00	23.50	2.40	0.15	0.12
10.25	0.46	0.00	0.00	23.75	2.40	0.15	0.12
10.50	0.49	0.00	0.00	24.00	2.41	0.15	0.12
10.75	0.53	0.00	0.00				
11.00	0.57	0.00	0.00				
11.25	0.62	0.00	0.00				
11.50	0.68	0.00	0.00				
11.75	0.93	0.00	0.00				
12.00	1.60	0.01	0.00				
12.25	1.70	0.02	0.06				
12.50	1.77	0.03	0.22				
12.75	1.82	0.03	0.39				
13.00	1.86	0.04	0.46				
13.25	1.90	0.04	0.44				

Summary for Subcatchment 5S: Redwood

Runoff = 46.57 cfs @ 12.02 hrs, Volume= 2.560 af, Depth> 1.30"
 Routed to Pond 6P : Detention Pond

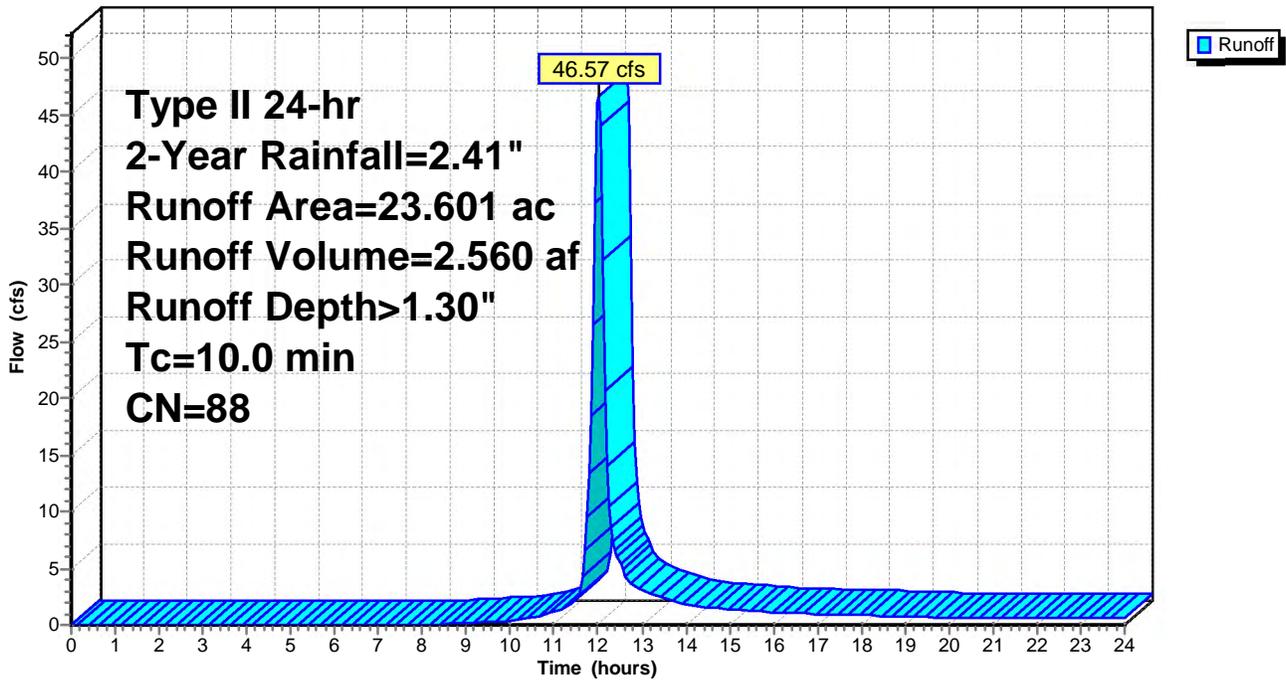
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-Year Rainfall=2.41"

Area (ac)	CN	Description
14.141	98	Paved parking, HSG C
9.460	74	>75% Grass cover, Good, HSG C
23.601	88	Weighted Average
9.460		40.08% Pervious Area
14.141		59.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Subcatchment 5S: Redwood

Hydrograph



Hydrograph for Subcatchment 5S: Redwood

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	1.93	0.91	2.33
0.25	0.01	0.00	0.00	13.75	1.95	0.93	2.06
0.50	0.01	0.00	0.00	14.00	1.98	0.95	1.84
0.75	0.02	0.00	0.00	14.25	2.00	0.96	1.68
1.00	0.03	0.00	0.00	14.50	2.02	0.98	1.60
1.25	0.03	0.00	0.00	14.75	2.04	1.00	1.52
1.50	0.04	0.00	0.00	15.00	2.06	1.01	1.45
1.75	0.05	0.00	0.00	15.25	2.07	1.03	1.37
2.00	0.05	0.00	0.00	15.50	2.09	1.04	1.29
2.25	0.06	0.00	0.00	15.75	2.11	1.05	1.21
2.50	0.07	0.00	0.00	16.00	2.12	1.06	1.13
2.75	0.08	0.00	0.00	16.25	2.13	1.07	1.07
3.00	0.08	0.00	0.00	16.50	2.15	1.09	1.04
3.25	0.09	0.00	0.00	16.75	2.16	1.10	1.02
3.50	0.10	0.00	0.00	17.00	2.17	1.11	0.99
3.75	0.11	0.00	0.00	17.25	2.19	1.12	0.96
4.00	0.12	0.00	0.00	17.50	2.20	1.13	0.93
4.25	0.12	0.00	0.00	17.75	2.21	1.14	0.90
4.50	0.13	0.00	0.00	18.00	2.22	1.14	0.87
4.75	0.14	0.00	0.00	18.25	2.23	1.15	0.85
5.00	0.15	0.00	0.00	18.50	2.24	1.16	0.82
5.25	0.16	0.00	0.00	18.75	2.25	1.17	0.79
5.50	0.17	0.00	0.00	19.00	2.26	1.18	0.76
5.75	0.18	0.00	0.00	19.25	2.27	1.19	0.73
6.00	0.19	0.00	0.00	19.50	2.28	1.19	0.70
6.25	0.20	0.00	0.00	19.75	2.29	1.20	0.67
6.50	0.22	0.00	0.00	20.00	2.29	1.21	0.64
6.75	0.23	0.00	0.00	20.25	2.30	1.21	0.62
7.00	0.24	0.00	0.00	20.50	2.31	1.22	0.62
7.25	0.25	0.00	0.00	20.75	2.32	1.23	0.61
7.50	0.26	0.00	0.00	21.00	2.33	1.23	0.61
7.75	0.28	0.00	0.00	21.25	2.33	1.24	0.60
8.00	0.29	0.00	0.02	21.50	2.34	1.25	0.60
8.25	0.30	0.00	0.04	21.75	2.35	1.25	0.59
8.50	0.32	0.00	0.07	22.00	2.35	1.26	0.58
8.75	0.34	0.00	0.12	22.25	2.36	1.26	0.58
9.00	0.35	0.00	0.17	22.50	2.37	1.27	0.57
9.25	0.37	0.01	0.22	22.75	2.38	1.28	0.57
9.50	0.39	0.01	0.26	23.00	2.38	1.28	0.56
9.75	0.41	0.01	0.32	23.25	2.39	1.29	0.56
10.00	0.44	0.02	0.40	23.50	2.40	1.29	0.55
10.25	0.46	0.02	0.52	23.75	2.40	1.30	0.54
10.50	0.49	0.03	0.66	24.00	2.41	1.30	0.54
10.75	0.53	0.04	0.86				
11.00	0.57	0.05	1.14				
11.25	0.62	0.07	1.58				
11.50	0.68	0.09	2.30				
11.75	0.93	0.22	9.58				
12.00	1.60	0.65	46.06				
12.25	1.70	0.73	10.50				
12.50	1.77	0.78	5.39				
12.75	1.82	0.82	3.70				
13.00	1.86	0.85	3.10				
13.25	1.90	0.88	2.64				

Summary for Pond 6P: Detention Pond

Inflow Area = 23.601 ac, 59.92% Impervious, Inflow Depth > 1.30" for 2-Year event
 Inflow = 46.57 cfs @ 12.02 hrs, Volume= 2.560 af
 Outflow = 0.35 cfs @ 24.00 hrs, Volume= 0.338 af, Atten= 99%, Lag= 719.1 min
 Discarded = 0.35 cfs @ 24.00 hrs, Volume= 0.338 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 843.31' @ 24.00 hrs Surf.Area= 57,221 sf Storage= 96,782 cf

Plug-Flow detention time= 404.1 min calculated for 0.337 af (13% of inflow)
 Center-of-Mass det. time= 252.8 min (1,079.2 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	841.50'	465,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
841.50	50,000	0	0
842.50	54,000	52,000	52,000
843.50	58,000	56,000	108,000
844.50	62,000	60,000	168,000
845.50	66,000	64,000	232,000
846.50	70,000	68,000	300,000
848.00	150,000	165,000	465,000

Device	Routing	Invert	Outlet Devices
#1	Discarded	841.50'	0.400 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 830.00'
#2	Primary	846.00'	7.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	846.00'	12.0" Round RCP_Round 12" L= 50.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 846.00' / 845.70' S= 0.0060 '/ Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 1	841.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads
#5	Device 1	843.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.35 cfs @ 24.00 hrs HW=843.31' (Free Discharge)

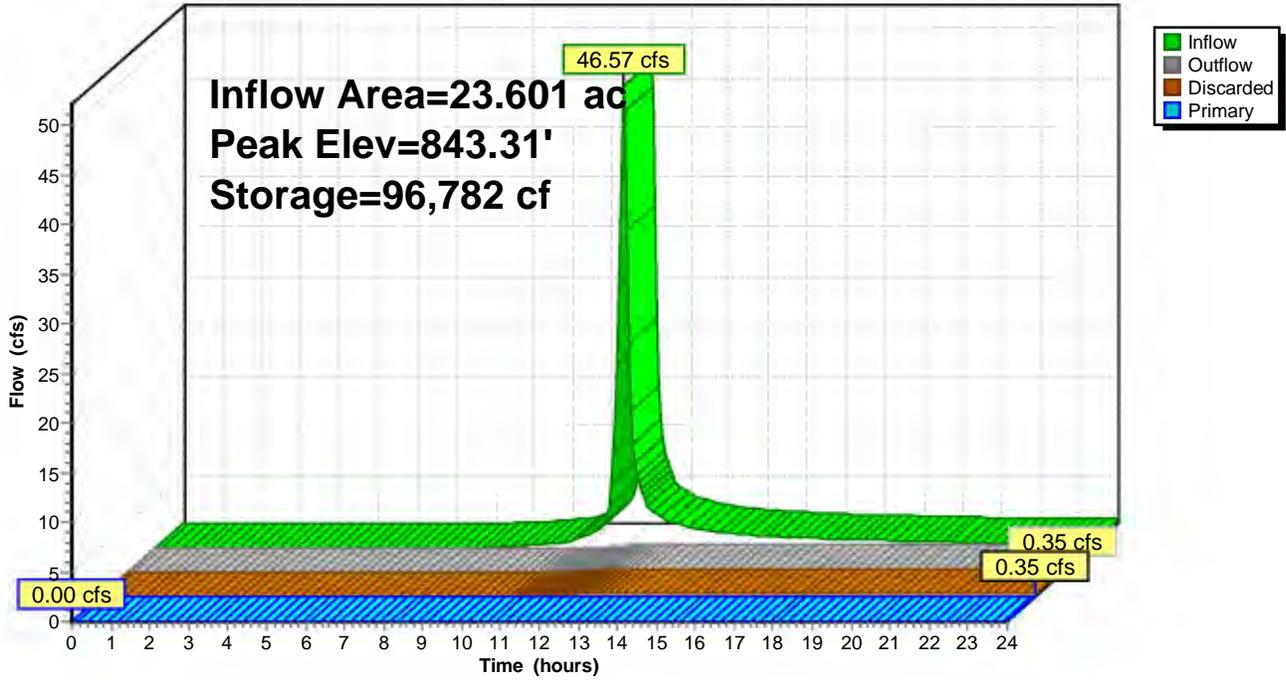
- ↑ 1=Exfiltration (Passes 0.35 cfs of 0.61 cfs potential flow)
- ↑ 4=Orifice/Grate (Orifice Controls 0.35 cfs @ 6.39 fps)
- ↑ 5=Orifice/Grate (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=841.50' (Free Discharge)

- ↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- ↑ 3=RCP_Round 12" (Controls 0.00 cfs)

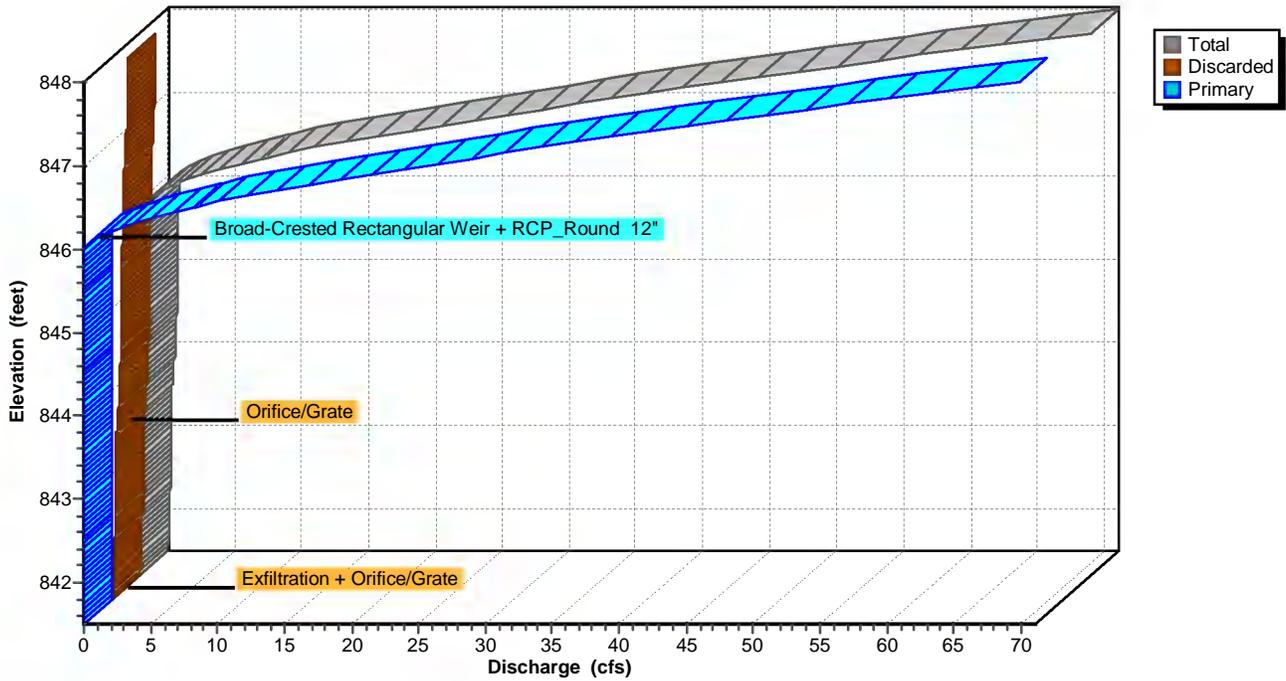
Pond 6P: Detention Pond

Hydrograph



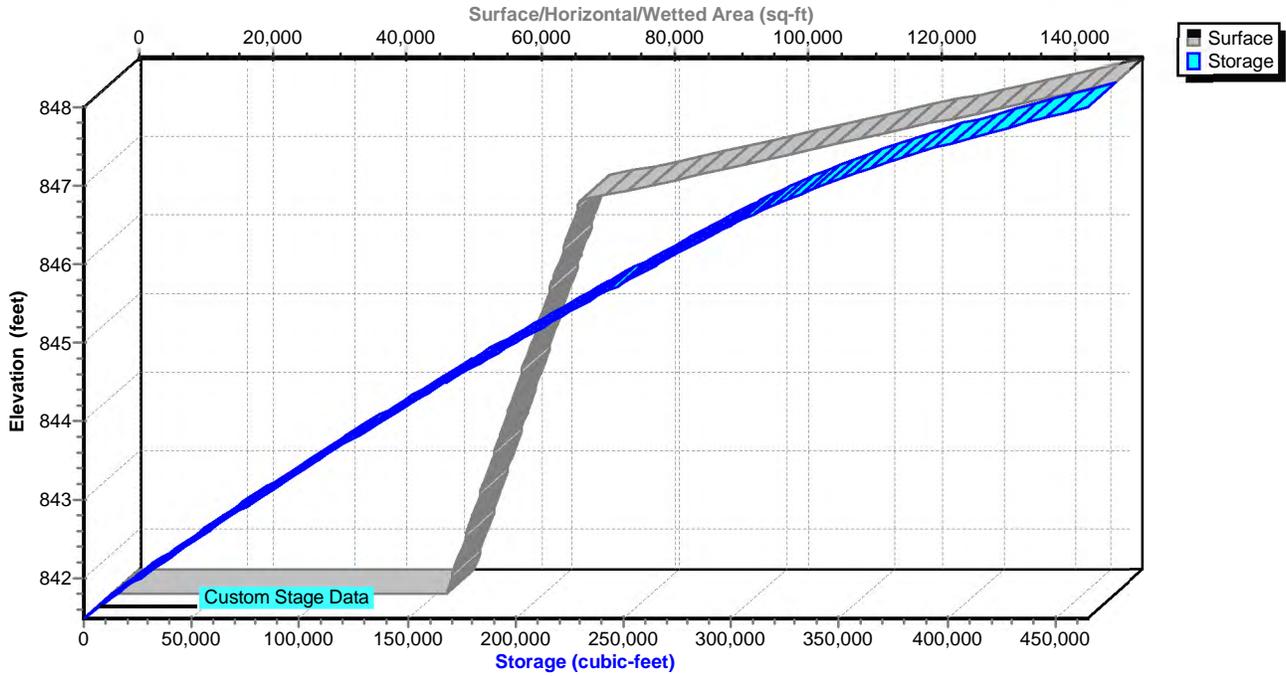
Pond 6P: Detention Pond

Stage-Discharge



Pond 6P: Detention Pond

Stage-Area-Storage



Hydrograph for Pond 6P: Detention Pond

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	841.50	0.00	0.00	0.00
0.50	0.00	0	841.50	0.00	0.00	0.00
1.00	0.00	0	841.50	0.00	0.00	0.00
1.50	0.00	0	841.50	0.00	0.00	0.00
2.00	0.00	0	841.50	0.00	0.00	0.00
2.50	0.00	0	841.50	0.00	0.00	0.00
3.00	0.00	0	841.50	0.00	0.00	0.00
3.50	0.00	0	841.50	0.00	0.00	0.00
4.00	0.00	0	841.50	0.00	0.00	0.00
4.50	0.00	0	841.50	0.00	0.00	0.00
5.00	0.00	0	841.50	0.00	0.00	0.00
5.50	0.00	0	841.50	0.00	0.00	0.00
6.00	0.00	0	841.50	0.00	0.00	0.00
6.50	0.00	0	841.50	0.00	0.00	0.00
7.00	0.00	0	841.50	0.00	0.00	0.00
7.50	0.00	0	841.50	0.00	0.00	0.00
8.00	0.02	5	841.50	0.00	0.00	0.00
8.50	0.07	81	841.50	0.00	0.00	0.00
9.00	0.17	290	841.51	0.00	0.00	0.00
9.50	0.26	668	841.51	0.01	0.01	0.00
10.00	0.40	1,227	841.52	0.01	0.01	0.00
10.50	0.66	2,132	841.54	0.03	0.03	0.00
11.00	1.14	3,650	841.57	0.04	0.04	0.00
11.50	2.30	6,475	841.63	0.08	0.08	0.00
12.00	46.06	32,476	842.13	0.20	0.20	0.00
12.50	5.39	63,622	842.71	0.28	0.28	0.00
13.00	3.10	70,080	842.83	0.30	0.30	0.00
13.50	2.33	74,338	842.91	0.31	0.31	0.00
14.00	1.84	77,508	842.96	0.31	0.31	0.00
14.50	1.60	79,985	843.01	0.32	0.32	0.00
15.00	1.45	82,149	843.05	0.32	0.32	0.00
15.50	1.29	84,028	843.08	0.33	0.33	0.00
16.00	1.13	85,618	843.11	0.33	0.33	0.00
16.50	1.04	86,962	843.13	0.33	0.33	0.00
17.00	0.99	88,192	843.15	0.33	0.33	0.00
17.50	0.93	89,318	843.17	0.34	0.34	0.00
18.00	0.87	90,338	843.19	0.34	0.34	0.00
18.50	0.82	91,252	843.21	0.34	0.34	0.00
19.00	0.76	92,060	843.22	0.34	0.34	0.00
19.50	0.70	92,761	843.23	0.34	0.34	0.00
20.00	0.64	93,355	843.25	0.34	0.34	0.00
20.50	0.62	93,863	843.25	0.34	0.34	0.00
21.00	0.61	94,345	843.26	0.34	0.34	0.00
21.50	0.60	94,805	843.27	0.35	0.35	0.00
22.00	0.58	95,244	843.28	0.35	0.35	0.00
22.50	0.57	95,661	843.29	0.35	0.35	0.00
23.00	0.56	96,057	843.29	0.35	0.35	0.00
23.50	0.55	96,431	843.30	0.35	0.35	0.00
24.00	0.54	96,784	843.31	0.35	0.35	0.00

Stage-Discharge for Pond 6P: Detention Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
841.50	0.00	0.00	0.00	846.90	22.84	1.09	21.75
841.60	0.06	0.06	0.00	847.00	26.61	1.10	25.51
841.70	0.10	0.10	0.00	847.10	30.48	1.11	29.36
841.80	0.13	0.13	0.00	847.20	34.46	1.13	33.34
841.90	0.16	0.16	0.00	847.30	38.51	1.14	37.37
842.00	0.18	0.18	0.00	847.40	42.67	1.15	41.52
842.10	0.20	0.20	0.00	847.50	47.09	1.16	45.93
842.20	0.21	0.21	0.00	847.60	51.64	1.18	50.47
842.30	0.23	0.23	0.00	847.70	56.32	1.19	55.13
842.40	0.24	0.24	0.00	847.80	61.12	1.20	59.92
842.50	0.26	0.26	0.00	847.90	66.02	1.21	64.81
842.60	0.27	0.27	0.00	848.00	71.04	1.22	69.82
842.70	0.28	0.28	0.00				
842.80	0.29	0.29	0.00				
842.90	0.31	0.31	0.00				
843.00	0.32	0.32	0.00				
843.10	0.33	0.33	0.00				
843.20	0.34	0.34	0.00				
843.30	0.35	0.35	0.00				
843.40	0.36	0.36	0.00				
843.50	0.37	0.37	0.00				
843.60	0.44	0.44	0.00				
843.70	0.49	0.49	0.00				
843.80	0.53	0.53	0.00				
843.90	0.56	0.56	0.00				
844.00	0.59	0.59	0.00				
844.10	0.62	0.62	0.00				
844.20	0.64	0.64	0.00				
844.30	0.66	0.66	0.00				
844.40	0.69	0.69	0.00				
844.50	0.71	0.71	0.00				
844.60	0.72	0.72	0.00				
844.70	0.73	0.73	0.00				
844.80	0.73	0.73	0.00				
844.90	0.74	0.74	0.00				
845.00	0.75	0.75	0.00				
845.10	0.76	0.76	0.00				
845.20	0.77	0.77	0.00				
845.30	0.78	0.78	0.00				
845.40	0.79	0.79	0.00				
845.50	0.79	0.79	0.00				
845.60	0.80	0.80	0.00				
845.70	0.81	0.81	0.00				
845.80	0.82	0.82	0.00				
845.90	0.83	0.83	0.00				
846.00	0.84	0.84	0.00				
846.10	1.50	0.85	0.65				
846.20	2.75	0.86	1.89				
846.30	4.45	0.87	3.59				
846.40	6.55	0.88	5.68				
846.50	9.07	0.88	8.18				
846.60	12.00	0.94	11.06				
846.70	15.41	0.99	14.42				
846.80	19.23	1.05	18.18				

Stage-Area-Storage for Pond 6P: Detention Pond

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
841.50	50,000	0	846.90	91,333	332,267
841.60	50,400	5,020	847.00	96,667	341,667
841.70	50,800	10,080	847.10	102,000	351,600
841.80	51,200	15,180	847.20	107,333	362,067
841.90	51,600	20,320	847.30	112,667	373,067
842.00	52,000	25,500	847.40	118,000	384,600
842.10	52,400	30,720	847.50	123,333	396,667
842.20	52,800	35,980	847.60	128,667	409,267
842.30	53,200	41,280	847.70	134,000	422,400
842.40	53,600	46,620	847.80	139,333	436,067
842.50	54,000	52,000	847.90	144,667	450,267
842.60	54,400	57,420	848.00	150,000	465,000
842.70	54,800	62,880			
842.80	55,200	68,380			
842.90	55,600	73,920			
843.00	56,000	79,500			
843.10	56,400	85,120			
843.20	56,800	90,780			
843.30	57,200	96,480			
843.40	57,600	102,220			
843.50	58,000	108,000			
843.60	58,400	113,820			
843.70	58,800	119,680			
843.80	59,200	125,580			
843.90	59,600	131,520			
844.00	60,000	137,500			
844.10	60,400	143,520			
844.20	60,800	149,580			
844.30	61,200	155,680			
844.40	61,600	161,820			
844.50	62,000	168,000			
844.60	62,400	174,220			
844.70	62,800	180,480			
844.80	63,200	186,780			
844.90	63,600	193,120			
845.00	64,000	199,500			
845.10	64,400	205,920			
845.20	64,800	212,380			
845.30	65,200	218,880			
845.40	65,600	225,420			
845.50	66,000	232,000			
845.60	66,400	238,620			
845.70	66,800	245,280			
845.80	67,200	251,980			
845.90	67,600	258,720			
846.00	68,000	265,500			
846.10	68,400	272,320			
846.20	68,800	279,180			
846.30	69,200	286,080			
846.40	69,600	293,020			
846.50	70,000	300,000			
846.60	75,333	307,267			
846.70	80,667	315,067			
846.80	86,000	323,400			

RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Type II 24-hr 100-Year Rainfall=5.46"

Printed 11/29/2023

Page 25

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX #1	Runoff Area=0.730 ac 0.00% Impervious Runoff Depth>1.55" Flow Length=260' Slope=0.0300 '/ Tc=45.1 min CN=60 Runoff=0.67 cfs 0.094 af
Subcatchment 2S: EX #2	Runoff Area=6.350 ac 0.00% Impervious Runoff Depth>1.54" Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=4.64 cfs 0.816 af
Subcatchment 3S: EX #3	Runoff Area=1.500 ac 0.00% Impervious Runoff Depth>1.54" Flow Length=380' Slope=0.0200 '/ Tc=61.4 min CN=60 Runoff=1.10 cfs 0.193 af
Subcatchment 4S: EX #4	Runoff Area=16.280 ac 0.00% Impervious Runoff Depth>1.54" Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=11.89 cfs 2.093 af
Subcatchment 5S: Redwood	Runoff Area=23.601 ac 59.92% Impervious Runoff Depth>4.10" Tc=10.0 min CN=88 Runoff=140.53 cfs 8.064 af
Pond 6P: Detention Pond	Peak Elev=846.19' Storage=278,207 cf Inflow=140.53 cfs 8.064 af Discarded=0.86 cfs 0.898 af Primary=1.70 cfs 0.914 af Outflow=2.55 cfs 1.812 af

Total Runoff Area = 48.461 ac Runoff Volume = 11.260 af Average Runoff Depth = 2.79"
70.82% Pervious = 34.320 ac 29.18% Impervious = 14.141 ac

Summary for Subcatchment 1S: EX #1

Runoff = 0.67 cfs @ 12.48 hrs, Volume= 0.094 af, Depth> 1.55"

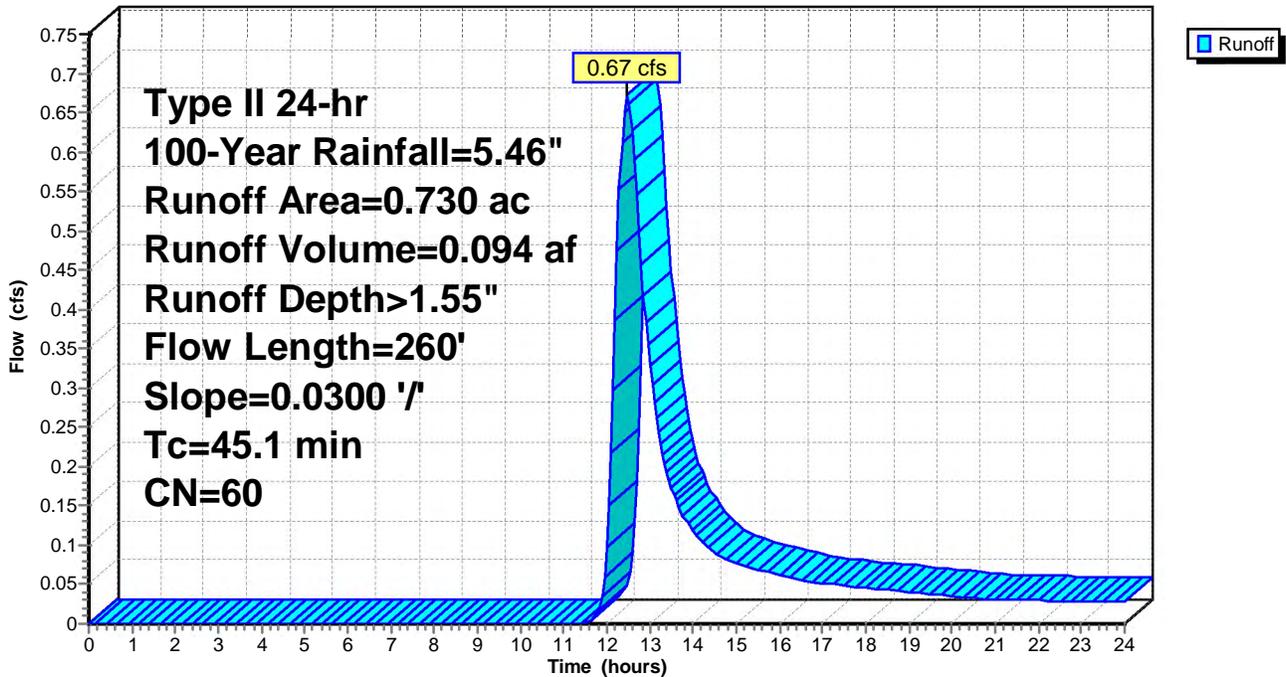
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=5.46"

Area (ac)	CN	Description
0.730	60	Woods, Fair, HSG B
0.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.1	260	0.0300	0.10		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"

Subcatchment 1S: EX #1

Hydrograph



Hydrograph for Subcatchment 1S: EX #1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	4.36	0.95	0.17
0.25	0.01	0.00	0.00	13.75	4.42	0.98	0.14
0.50	0.03	0.00	0.00	14.00	4.48	1.01	0.12
0.75	0.04	0.00	0.00	14.25	4.53	1.03	0.10
1.00	0.06	0.00	0.00	14.50	4.57	1.06	0.09
1.25	0.07	0.00	0.00	14.75	4.62	1.08	0.08
1.50	0.09	0.00	0.00	15.00	4.66	1.11	0.08
1.75	0.10	0.00	0.00	15.25	4.70	1.13	0.07
2.00	0.12	0.00	0.00	15.50	4.74	1.15	0.07
2.25	0.14	0.00	0.00	15.75	4.77	1.17	0.07
2.50	0.15	0.00	0.00	16.00	4.80	1.19	0.06
2.75	0.17	0.00	0.00	16.25	4.84	1.21	0.06
3.00	0.19	0.00	0.00	16.50	4.87	1.22	0.06
3.25	0.21	0.00	0.00	16.75	4.90	1.24	0.05
3.50	0.22	0.00	0.00	17.00	4.92	1.26	0.05
3.75	0.24	0.00	0.00	17.25	4.95	1.27	0.05
4.00	0.26	0.00	0.00	17.50	4.98	1.29	0.05
4.25	0.28	0.00	0.00	17.75	5.00	1.30	0.05
4.50	0.30	0.00	0.00	18.00	5.03	1.32	0.05
4.75	0.32	0.00	0.00	18.25	5.05	1.33	0.04
5.00	0.34	0.00	0.00	18.50	5.08	1.35	0.04
5.25	0.37	0.00	0.00	18.75	5.10	1.36	0.04
5.50	0.39	0.00	0.00	19.00	5.12	1.37	0.04
5.75	0.41	0.00	0.00	19.25	5.14	1.38	0.04
6.00	0.44	0.00	0.00	19.50	5.16	1.40	0.04
6.25	0.46	0.00	0.00	19.75	5.18	1.41	0.04
6.50	0.49	0.00	0.00	20.00	5.20	1.42	0.04
6.75	0.51	0.00	0.00	20.25	5.22	1.43	0.03
7.00	0.54	0.00	0.00	20.50	5.23	1.44	0.03
7.25	0.57	0.00	0.00	20.75	5.25	1.45	0.03
7.50	0.60	0.00	0.00	21.00	5.27	1.46	0.03
7.75	0.63	0.00	0.00	21.25	5.28	1.47	0.03
8.00	0.66	0.00	0.00	21.50	5.30	1.48	0.03
8.25	0.69	0.00	0.00	21.75	5.32	1.49	0.03
8.50	0.72	0.00	0.00	22.00	5.33	1.50	0.03
8.75	0.76	0.00	0.00	22.25	5.35	1.51	0.03
9.00	0.80	0.00	0.00	22.50	5.37	1.52	0.03
9.25	0.85	0.00	0.00	22.75	5.38	1.53	0.03
9.50	0.89	0.00	0.00	23.00	5.40	1.54	0.03
9.75	0.94	0.00	0.00	23.25	5.41	1.55	0.03
10.00	0.99	0.00	0.00	23.50	5.43	1.56	0.03
10.25	1.05	0.00	0.00	23.75	5.44	1.57	0.03
10.50	1.11	0.00	0.00	24.00	5.46	1.58	0.03
10.75	1.19	0.00	0.00				
11.00	1.28	0.00	0.00				
11.25	1.40	0.00	0.00				
11.50	1.55	0.01	0.00				
11.75	2.11	0.08	0.01				
12.00	3.62	0.58	0.10				
12.25	3.86	0.69	0.48				
12.50	4.01	0.77	0.67				
12.75	4.12	0.82	0.50				
13.00	4.22	0.87	0.33				
13.25	4.29	0.91	0.23				

Summary for Subcatchment 2S: EX #2

Runoff = 4.64 cfs @ 12.71 hrs, Volume= 0.816 af, Depth> 1.54"

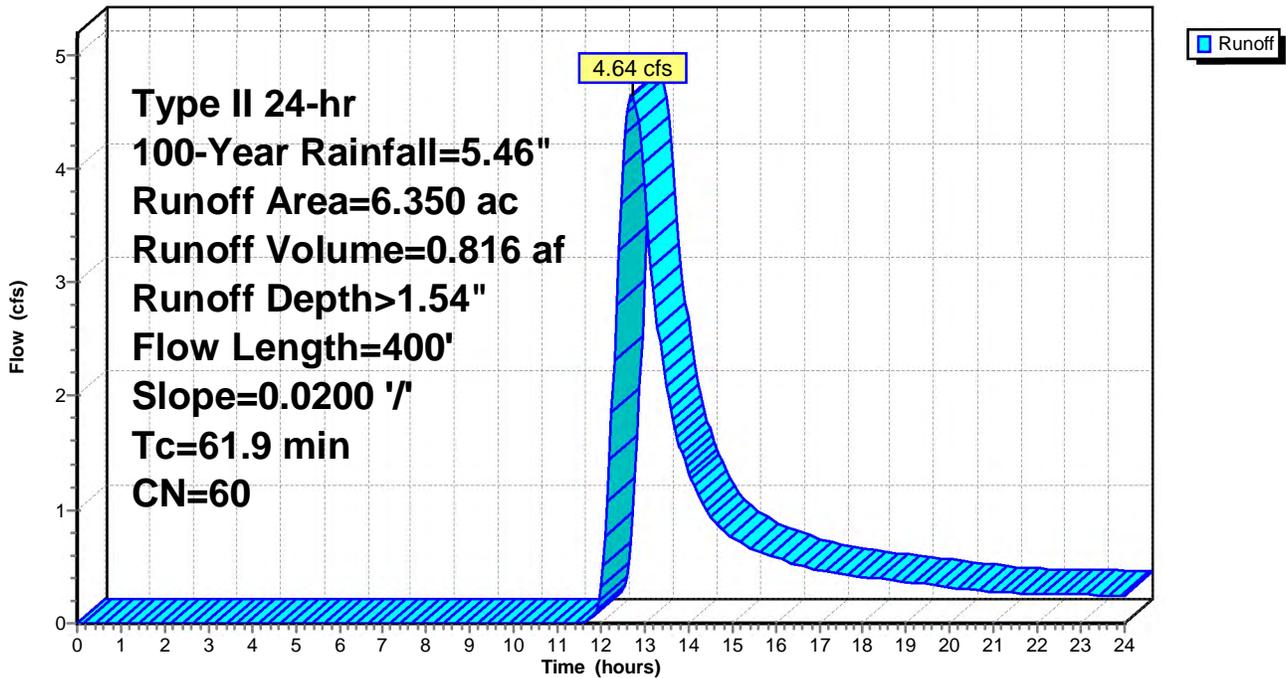
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=5.46"

Area (ac)	CN	Description
6.350	60	Woods, Fair, HSG B
6.350		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 2S: EX #2

Hydrograph



Hydrograph for Subcatchment 2S: EX #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	4.36	0.95	2.09
0.25	0.01	0.00	0.00	13.75	4.42	0.98	1.63
0.50	0.03	0.00	0.00	14.00	4.48	1.01	1.32
0.75	0.04	0.00	0.00	14.25	4.53	1.03	1.11
1.00	0.06	0.00	0.00	14.50	4.57	1.06	0.95
1.25	0.07	0.00	0.00	14.75	4.62	1.08	0.84
1.50	0.09	0.00	0.00	15.00	4.66	1.11	0.76
1.75	0.10	0.00	0.00	15.25	4.70	1.13	0.70
2.00	0.12	0.00	0.00	15.50	4.74	1.15	0.65
2.25	0.14	0.00	0.00	15.75	4.77	1.17	0.61
2.50	0.15	0.00	0.00	16.00	4.80	1.19	0.58
2.75	0.17	0.00	0.00	16.25	4.84	1.21	0.55
3.00	0.19	0.00	0.00	16.50	4.87	1.22	0.52
3.25	0.21	0.00	0.00	16.75	4.90	1.24	0.49
3.50	0.22	0.00	0.00	17.00	4.92	1.26	0.47
3.75	0.24	0.00	0.00	17.25	4.95	1.27	0.45
4.00	0.26	0.00	0.00	17.50	4.98	1.29	0.44
4.25	0.28	0.00	0.00	17.75	5.00	1.30	0.42
4.50	0.30	0.00	0.00	18.00	5.03	1.32	0.41
4.75	0.32	0.00	0.00	18.25	5.05	1.33	0.40
5.00	0.34	0.00	0.00	18.50	5.08	1.35	0.39
5.25	0.37	0.00	0.00	18.75	5.10	1.36	0.38
5.50	0.39	0.00	0.00	19.00	5.12	1.37	0.37
5.75	0.41	0.00	0.00	19.25	5.14	1.38	0.35
6.00	0.44	0.00	0.00	19.50	5.16	1.40	0.34
6.25	0.46	0.00	0.00	19.75	5.18	1.41	0.33
6.50	0.49	0.00	0.00	20.00	5.20	1.42	0.32
6.75	0.51	0.00	0.00	20.25	5.22	1.43	0.31
7.00	0.54	0.00	0.00	20.50	5.23	1.44	0.30
7.25	0.57	0.00	0.00	20.75	5.25	1.45	0.29
7.50	0.60	0.00	0.00	21.00	5.27	1.46	0.28
7.75	0.63	0.00	0.00	21.25	5.28	1.47	0.27
8.00	0.66	0.00	0.00	21.50	5.30	1.48	0.27
8.25	0.69	0.00	0.00	21.75	5.32	1.49	0.27
8.50	0.72	0.00	0.00	22.00	5.33	1.50	0.26
8.75	0.76	0.00	0.00	22.25	5.35	1.51	0.26
9.00	0.80	0.00	0.00	22.50	5.37	1.52	0.26
9.25	0.85	0.00	0.00	22.75	5.38	1.53	0.26
9.50	0.89	0.00	0.00	23.00	5.40	1.54	0.26
9.75	0.94	0.00	0.00	23.25	5.41	1.55	0.25
10.00	0.99	0.00	0.00	23.50	5.43	1.56	0.25
10.25	1.05	0.00	0.00	23.75	5.44	1.57	0.25
10.50	1.11	0.00	0.00	24.00	5.46	1.58	0.25
10.75	1.19	0.00	0.00				
11.00	1.28	0.00	0.00				
11.25	1.40	0.00	0.00				
11.50	1.55	0.01	0.00				
11.75	2.11	0.08	0.03				
12.00	3.62	0.58	0.33				
12.25	3.86	0.69	1.86				
12.50	4.01	0.77	4.04				
12.75	4.12	0.82	4.62				
13.00	4.22	0.87	3.83				
13.25	4.29	0.91	2.77				

Summary for Subcatchment 3S: EX #3

Runoff = 1.10 cfs @ 12.71 hrs, Volume= 0.193 af, Depth> 1.54"

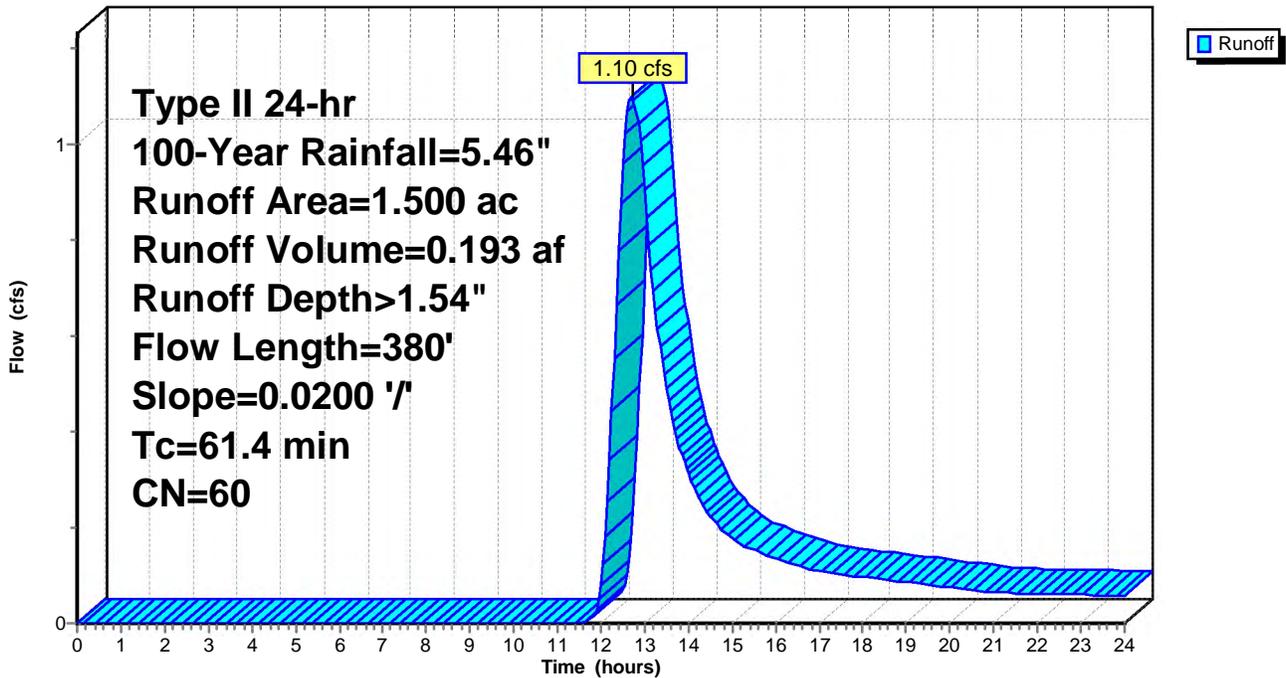
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=5.46"

Area (ac)	CN	Description
1.500	60	Woods, Fair, HSG B
1.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
1.9	80	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.4	380	Total			

Subcatchment 3S: EX #3

Hydrograph



Hydrograph for Subcatchment 3S: EX #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	4.36	0.95	0.49
0.25	0.01	0.00	0.00	13.75	4.42	0.98	0.38
0.50	0.03	0.00	0.00	14.00	4.48	1.01	0.31
0.75	0.04	0.00	0.00	14.25	4.53	1.03	0.26
1.00	0.06	0.00	0.00	14.50	4.57	1.06	0.22
1.25	0.07	0.00	0.00	14.75	4.62	1.08	0.20
1.50	0.09	0.00	0.00	15.00	4.66	1.11	0.18
1.75	0.10	0.00	0.00	15.25	4.70	1.13	0.16
2.00	0.12	0.00	0.00	15.50	4.74	1.15	0.15
2.25	0.14	0.00	0.00	15.75	4.77	1.17	0.14
2.50	0.15	0.00	0.00	16.00	4.80	1.19	0.14
2.75	0.17	0.00	0.00	16.25	4.84	1.21	0.13
3.00	0.19	0.00	0.00	16.50	4.87	1.22	0.12
3.25	0.21	0.00	0.00	16.75	4.90	1.24	0.12
3.50	0.22	0.00	0.00	17.00	4.92	1.26	0.11
3.75	0.24	0.00	0.00	17.25	4.95	1.27	0.11
4.00	0.26	0.00	0.00	17.50	4.98	1.29	0.10
4.25	0.28	0.00	0.00	17.75	5.00	1.30	0.10
4.50	0.30	0.00	0.00	18.00	5.03	1.32	0.10
4.75	0.32	0.00	0.00	18.25	5.05	1.33	0.09
5.00	0.34	0.00	0.00	18.50	5.08	1.35	0.09
5.25	0.37	0.00	0.00	18.75	5.10	1.36	0.09
5.50	0.39	0.00	0.00	19.00	5.12	1.37	0.09
5.75	0.41	0.00	0.00	19.25	5.14	1.38	0.08
6.00	0.44	0.00	0.00	19.50	5.16	1.40	0.08
6.25	0.46	0.00	0.00	19.75	5.18	1.41	0.08
6.50	0.49	0.00	0.00	20.00	5.20	1.42	0.08
6.75	0.51	0.00	0.00	20.25	5.22	1.43	0.07
7.00	0.54	0.00	0.00	20.50	5.23	1.44	0.07
7.25	0.57	0.00	0.00	20.75	5.25	1.45	0.07
7.50	0.60	0.00	0.00	21.00	5.27	1.46	0.07
7.75	0.63	0.00	0.00	21.25	5.28	1.47	0.06
8.00	0.66	0.00	0.00	21.50	5.30	1.48	0.06
8.25	0.69	0.00	0.00	21.75	5.32	1.49	0.06
8.50	0.72	0.00	0.00	22.00	5.33	1.50	0.06
8.75	0.76	0.00	0.00	22.25	5.35	1.51	0.06
9.00	0.80	0.00	0.00	22.50	5.37	1.52	0.06
9.25	0.85	0.00	0.00	22.75	5.38	1.53	0.06
9.50	0.89	0.00	0.00	23.00	5.40	1.54	0.06
9.75	0.94	0.00	0.00	23.25	5.41	1.55	0.06
10.00	0.99	0.00	0.00	23.50	5.43	1.56	0.06
10.25	1.05	0.00	0.00	23.75	5.44	1.57	0.06
10.50	1.11	0.00	0.00	24.00	5.46	1.58	0.06
10.75	1.19	0.00	0.00				
11.00	1.28	0.00	0.00				
11.25	1.40	0.00	0.00				
11.50	1.55	0.01	0.00				
11.75	2.11	0.08	0.01				
12.00	3.62	0.58	0.08				
12.25	3.86	0.69	0.44				
12.50	4.01	0.77	0.96				
12.75	4.12	0.82	1.10				
13.00	4.22	0.87	0.90				
13.25	4.29	0.91	0.65				

Summary for Subcatchment 4S: EX #4

Runoff = 11.89 cfs @ 12.71 hrs, Volume= 2.093 af, Depth> 1.54"

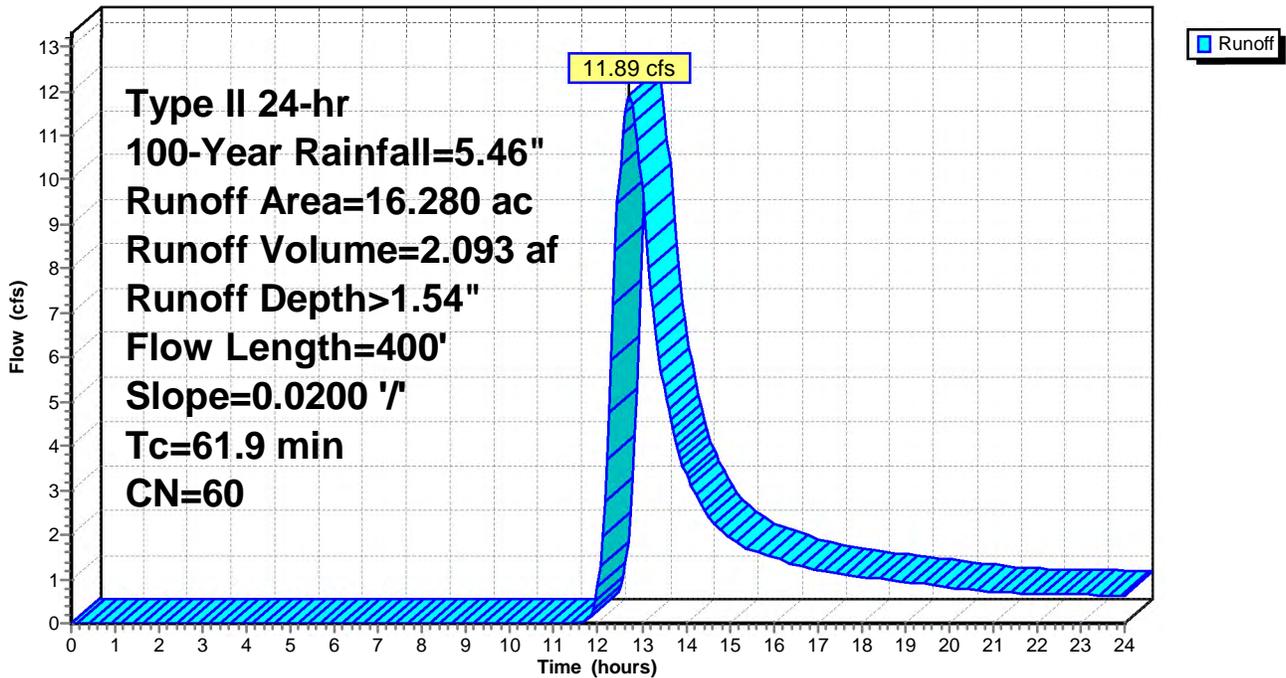
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=5.46"

Area (ac)	CN	Description
16.280	60	Woods, Fair, HSG B
16.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 4S: EX #4

Hydrograph



Hydrograph for Subcatchment 4S: EX #4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	4.36	0.95	5.36
0.25	0.01	0.00	0.00	13.75	4.42	0.98	4.19
0.50	0.03	0.00	0.00	14.00	4.48	1.01	3.39
0.75	0.04	0.00	0.00	14.25	4.53	1.03	2.84
1.00	0.06	0.00	0.00	14.50	4.57	1.06	2.44
1.25	0.07	0.00	0.00	14.75	4.62	1.08	2.15
1.50	0.09	0.00	0.00	15.00	4.66	1.11	1.94
1.75	0.10	0.00	0.00	15.25	4.70	1.13	1.78
2.00	0.12	0.00	0.00	15.50	4.74	1.15	1.66
2.25	0.14	0.00	0.00	15.75	4.77	1.17	1.57
2.50	0.15	0.00	0.00	16.00	4.80	1.19	1.48
2.75	0.17	0.00	0.00	16.25	4.84	1.21	1.40
3.00	0.19	0.00	0.00	16.50	4.87	1.22	1.32
3.25	0.21	0.00	0.00	16.75	4.90	1.24	1.25
3.50	0.22	0.00	0.00	17.00	4.92	1.26	1.20
3.75	0.24	0.00	0.00	17.25	4.95	1.27	1.16
4.00	0.26	0.00	0.00	17.50	4.98	1.29	1.12
4.25	0.28	0.00	0.00	17.75	5.00	1.30	1.09
4.50	0.30	0.00	0.00	18.00	5.03	1.32	1.06
4.75	0.32	0.00	0.00	18.25	5.05	1.33	1.03
5.00	0.34	0.00	0.00	18.50	5.08	1.35	1.00
5.25	0.37	0.00	0.00	18.75	5.10	1.36	0.97
5.50	0.39	0.00	0.00	19.00	5.12	1.37	0.94
5.75	0.41	0.00	0.00	19.25	5.14	1.38	0.91
6.00	0.44	0.00	0.00	19.50	5.16	1.40	0.88
6.25	0.46	0.00	0.00	19.75	5.18	1.41	0.85
6.50	0.49	0.00	0.00	20.00	5.20	1.42	0.82
6.75	0.51	0.00	0.00	20.25	5.22	1.43	0.79
7.00	0.54	0.00	0.00	20.50	5.23	1.44	0.76
7.25	0.57	0.00	0.00	20.75	5.25	1.45	0.73
7.50	0.60	0.00	0.00	21.00	5.27	1.46	0.71
7.75	0.63	0.00	0.00	21.25	5.28	1.47	0.70
8.00	0.66	0.00	0.00	21.50	5.30	1.48	0.69
8.25	0.69	0.00	0.00	21.75	5.32	1.49	0.68
8.50	0.72	0.00	0.00	22.00	5.33	1.50	0.68
8.75	0.76	0.00	0.00	22.25	5.35	1.51	0.67
9.00	0.80	0.00	0.00	22.50	5.37	1.52	0.67
9.25	0.85	0.00	0.00	22.75	5.38	1.53	0.66
9.50	0.89	0.00	0.00	23.00	5.40	1.54	0.65
9.75	0.94	0.00	0.00	23.25	5.41	1.55	0.65
10.00	0.99	0.00	0.00	23.50	5.43	1.56	0.64
10.25	1.05	0.00	0.00	23.75	5.44	1.57	0.64
10.50	1.11	0.00	0.00	24.00	5.46	1.58	0.63
10.75	1.19	0.00	0.00				
11.00	1.28	0.00	0.00				
11.25	1.40	0.00	0.00				
11.50	1.55	0.01	0.01				
11.75	2.11	0.08	0.07				
12.00	3.62	0.58	0.84				
12.25	3.86	0.69	4.76				
12.50	4.01	0.77	10.35				
12.75	4.12	0.82	11.83				
13.00	4.22	0.87	9.82				
13.25	4.29	0.91	7.09				

Summary for Subcatchment 5S: Redwood

Runoff = 140.53 cfs @ 12.01 hrs, Volume= 8.064 af, Depth> 4.10"
 Routed to Pond 6P : Detention Pond

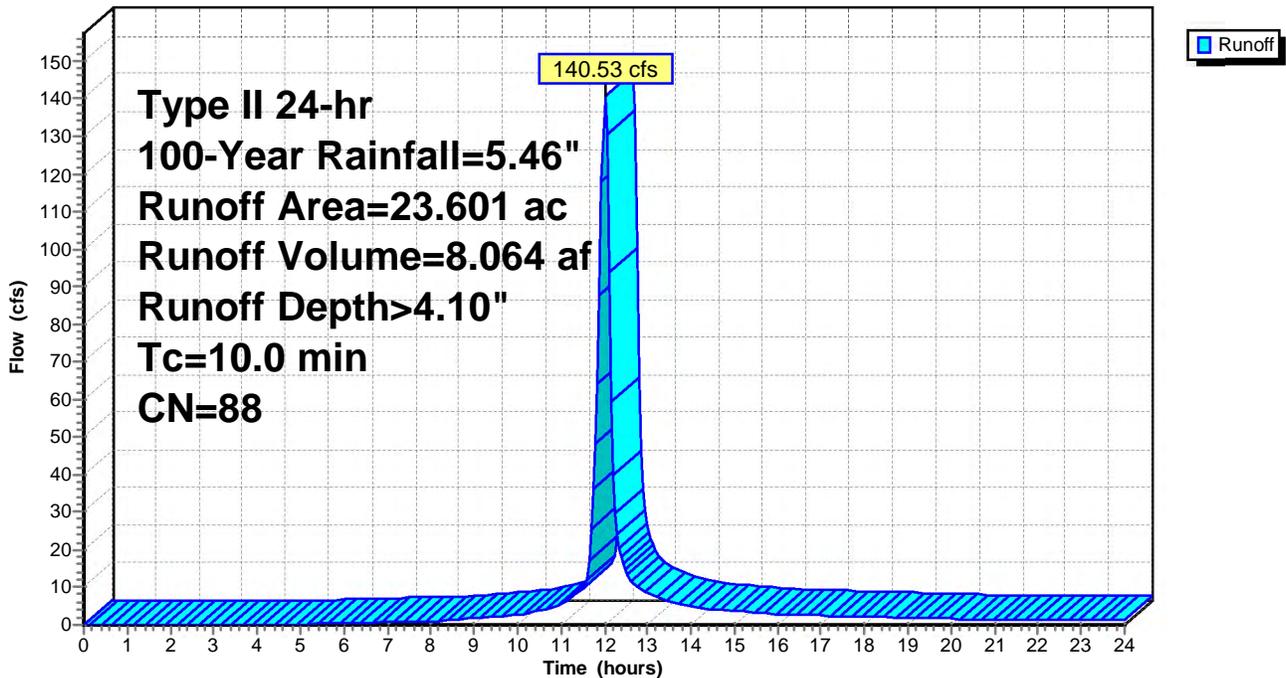
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=5.46"

Area (ac)	CN	Description
14.141	98	Paved parking, HSG C
9.460	74	>75% Grass cover, Good, HSG C
23.601	88	Weighted Average
9.460		40.08% Pervious Area
14.141		59.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Subcatchment 5S: Redwood

Hydrograph



Hydrograph for Subcatchment 5S: Redwood

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	4.36	3.07	6.25
0.25	0.01	0.00	0.00	13.75	4.42	3.12	5.50
0.50	0.03	0.00	0.00	14.00	4.48	3.17	4.89
0.75	0.04	0.00	0.00	14.25	4.53	3.22	4.45
1.00	0.06	0.00	0.00	14.50	4.57	3.27	4.23
1.25	0.07	0.00	0.00	14.75	4.62	3.31	4.02
1.50	0.09	0.00	0.00	15.00	4.66	3.35	3.81
1.75	0.10	0.00	0.00	15.25	4.70	3.38	3.60
2.00	0.12	0.00	0.00	15.50	4.74	3.42	3.39
2.25	0.14	0.00	0.00	15.75	4.77	3.45	3.17
2.50	0.15	0.00	0.00	16.00	4.80	3.48	2.96
2.75	0.17	0.00	0.00	16.25	4.84	3.51	2.80
3.00	0.19	0.00	0.00	16.50	4.87	3.54	2.72
3.25	0.21	0.00	0.00	16.75	4.90	3.57	2.65
3.50	0.22	0.00	0.00	17.00	4.92	3.60	2.57
3.75	0.24	0.00	0.00	17.25	4.95	3.62	2.50
4.00	0.26	0.00	0.00	17.50	4.98	3.65	2.42
4.25	0.28	0.00	0.00	17.75	5.00	3.67	2.35
4.50	0.30	0.00	0.05	18.00	5.03	3.70	2.27
4.75	0.32	0.00	0.10	18.25	5.05	3.72	2.19
5.00	0.34	0.00	0.16	18.50	5.08	3.74	2.12
5.25	0.37	0.01	0.23	18.75	5.10	3.76	2.04
5.50	0.39	0.01	0.29	19.00	5.12	3.78	1.96
5.75	0.41	0.01	0.36	19.25	5.14	3.80	1.89
6.00	0.44	0.02	0.43	19.50	5.16	3.82	1.81
6.25	0.46	0.02	0.50	19.75	5.18	3.84	1.73
6.50	0.49	0.03	0.58	20.00	5.20	3.86	1.66
6.75	0.51	0.04	0.66	20.25	5.22	3.87	1.61
7.00	0.54	0.04	0.73	20.50	5.23	3.89	1.59
7.25	0.57	0.05	0.81	20.75	5.25	3.91	1.57
7.50	0.60	0.06	0.90	21.00	5.27	3.92	1.56
7.75	0.63	0.07	0.98	21.25	5.28	3.94	1.54
8.00	0.66	0.08	1.06	21.50	5.30	3.96	1.53
8.25	0.69	0.10	1.19	21.75	5.32	3.97	1.51
8.50	0.72	0.11	1.39	22.00	5.33	3.99	1.50
8.75	0.76	0.13	1.61	22.25	5.35	4.00	1.48
9.00	0.80	0.15	1.85	22.50	5.37	4.02	1.47
9.25	0.85	0.17	2.03	22.75	5.38	4.03	1.45
9.50	0.89	0.19	2.13	23.00	5.40	4.05	1.44
9.75	0.94	0.22	2.34	23.25	5.41	4.06	1.42
10.00	0.99	0.25	2.71	23.50	5.43	4.08	1.41
10.25	1.05	0.28	3.19	23.75	5.44	4.09	1.39
10.50	1.11	0.32	3.78	24.00	5.46	4.11	1.38
10.75	1.19	0.37	4.56				
11.00	1.28	0.43	5.59				
11.25	1.40	0.51	7.22				
11.50	1.55	0.61	9.74				
11.75	2.11	1.06	36.04				
12.00	3.62	2.38	139.92				
12.25	3.86	2.60	29.60				
12.50	4.01	2.74	14.77				
12.75	4.12	2.84	10.05				
13.00	4.22	2.93	8.36				
13.25	4.29	3.00	7.10				

Summary for Pond 6P: Detention Pond

Inflow Area = 23.601 ac, 59.92% Impervious, Inflow Depth > 4.10" for 100-Year event
 Inflow = 140.53 cfs @ 12.01 hrs, Volume= 8.064 af
 Outflow = 2.55 cfs @ 17.07 hrs, Volume= 1.812 af, Atten= 98%, Lag= 303.7 min
 Discarded = 0.86 cfs @ 17.07 hrs, Volume= 0.898 af
 Primary = 1.70 cfs @ 17.07 hrs, Volume= 0.914 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.19' @ 17.07 hrs Surf.Area= 68,743 sf Storage= 278,207 cf

Plug-Flow detention time= 454.4 min calculated for 1.812 af (22% of inflow)
 Center-of-Mass det. time= 297.1 min (1,091.2 - 794.1)

Volume	Invert	Avail.Storage	Storage Description
#1	841.50'	465,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
841.50	50,000	0	0
842.50	54,000	52,000	52,000
843.50	58,000	56,000	108,000
844.50	62,000	60,000	168,000
845.50	66,000	64,000	232,000
846.50	70,000	68,000	300,000
848.00	150,000	165,000	465,000

Device	Routing	Invert	Outlet Devices
#1	Discarded	841.50'	0.400 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 830.00'
#2	Primary	846.00'	7.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	846.00'	12.0" Round RCP_Round 12" L= 50.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 846.00' / 845.70' S= 0.0060 '/ Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 1	841.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads
#5	Device 1	843.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads

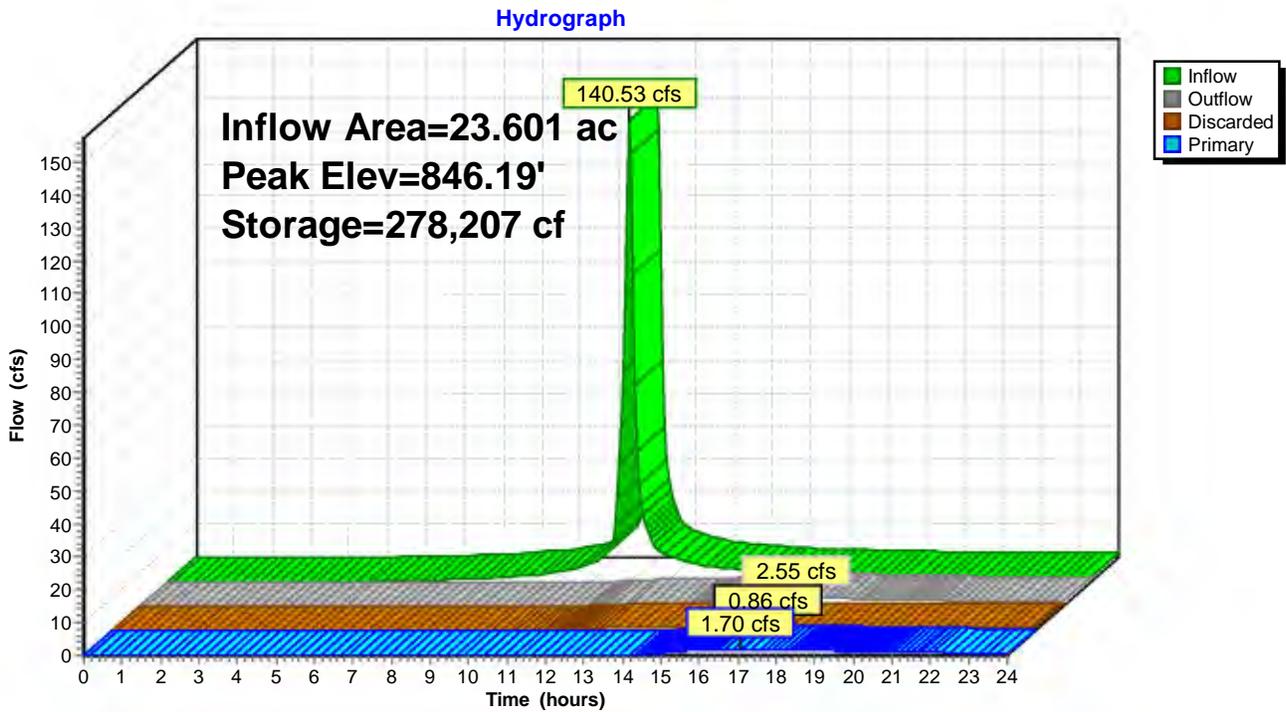
Discarded OutFlow Max=0.86 cfs @ 17.07 hrs HW=846.19' (Free Discharge)

- ↑ 1=Exfiltration (Controls 0.86 cfs)
- ↑ 4=Orifice/Grate (Passes < 0.57 cfs potential flow)
- ↑ 5=Orifice/Grate (Passes < 0.43 cfs potential flow)

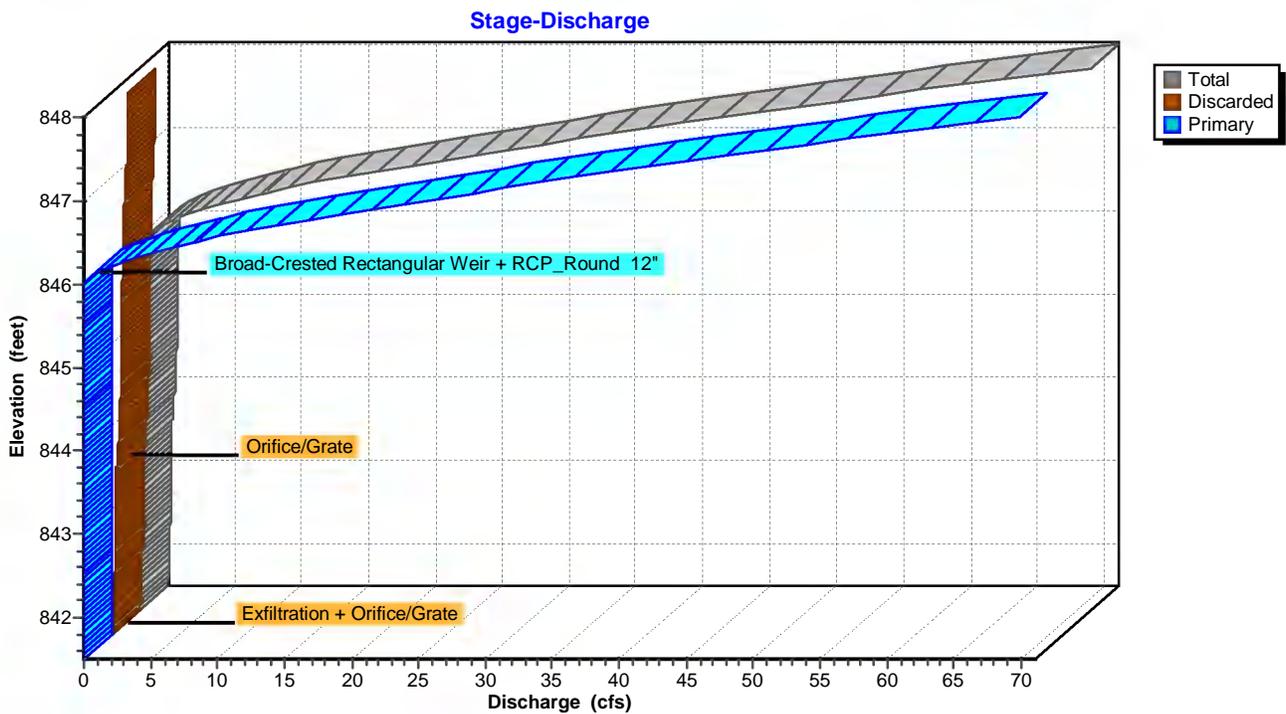
Primary OutFlow Max=1.69 cfs @ 17.07 hrs HW=846.19' (Free Discharge)

- ↑ 2=Broad-Crested Rectangular Weir (Weir Controls 1.57 cfs @ 1.21 fps)
- ↑ 3=RCP_Round 12" (Barrel Controls 0.12 cfs @ 1.76 fps)

Pond 6P: Detention Pond

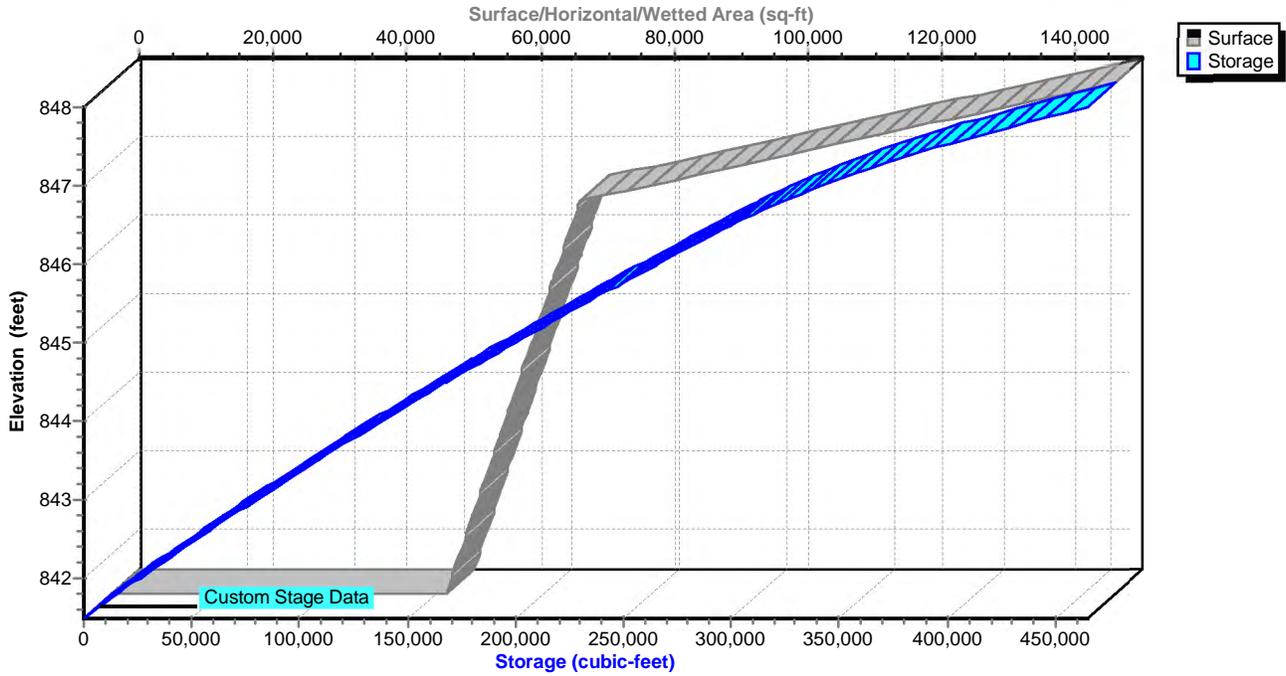


Pond 6P: Detention Pond



Pond 6P: Detention Pond

Stage-Area-Storage



Hydrograph for Pond 6P: Detention Pond

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	841.50	0.00	0.00	0.00
0.50	0.00	0	841.50	0.00	0.00	0.00
1.00	0.00	0	841.50	0.00	0.00	0.00
1.50	0.00	0	841.50	0.00	0.00	0.00
2.00	0.00	0	841.50	0.00	0.00	0.00
2.50	0.00	0	841.50	0.00	0.00	0.00
3.00	0.00	0	841.50	0.00	0.00	0.00
3.50	0.00	0	841.50	0.00	0.00	0.00
4.00	0.00	0	841.50	0.00	0.00	0.00
4.50	0.05	19	841.50	0.00	0.00	0.00
5.00	0.16	202	841.50	0.00	0.00	0.00
5.50	0.29	602	841.51	0.01	0.01	0.00
6.00	0.43	1,231	841.52	0.01	0.01	0.00
6.50	0.58	2,102	841.54	0.03	0.03	0.00
7.00	0.73	3,224	841.56	0.04	0.04	0.00
7.50	0.90	4,605	841.59	0.06	0.06	0.00
8.00	1.06	6,250	841.62	0.07	0.07	0.00
8.50	1.39	8,266	841.66	0.09	0.09	0.00
9.00	1.85	10,989	841.72	0.11	0.11	0.00
9.50	2.13	14,409	841.78	0.13	0.13	0.00
10.00	2.71	18,415	841.86	0.15	0.15	0.00
10.50	3.78	23,898	841.97	0.17	0.17	0.00
11.00	5.59	31,848	842.12	0.20	0.20	0.00
11.50	9.74	44,723	842.36	0.24	0.24	0.00
12.00	139.92	133,098	843.93	0.57	0.57	0.00
12.50	14.77	223,500	845.37	0.78	0.78	0.00
13.00	8.36	241,048	845.64	0.81	0.81	0.00
13.50	6.25	252,487	845.81	0.82	0.82	0.00
14.00	4.89	260,941	845.93	0.83	0.83	0.00
14.50	4.23	267,470	846.03	0.97	0.84	0.13
15.00	3.81	272,468	846.10	1.54	0.85	0.69
15.50	3.39	275,669	846.15	2.08	0.85	1.22
16.00	2.96	277,337	846.17	2.38	0.85	1.52
16.50	2.72	278,000	846.18	2.51	0.86	1.65
17.00	2.57	278,205	846.19	2.55	0.86	1.70
17.50	2.42	278,118	846.18	2.53	0.86	1.68
18.00	2.27	277,834	846.18	2.47	0.86	1.61
18.50	2.12	277,407	846.17	2.39	0.85	1.54
19.00	1.96	276,863	846.17	2.29	0.85	1.44
19.50	1.81	276,235	846.16	2.18	0.85	1.33
20.00	1.66	275,545	846.15	2.05	0.85	1.20
20.50	1.59	274,861	846.14	1.93	0.85	1.08
21.00	1.56	274,310	846.13	1.83	0.85	0.98
21.50	1.53	273,866	846.12	1.75	0.85	0.90
22.00	1.50	273,498	846.12	1.69	0.85	0.84
22.50	1.47	273,182	846.11	1.64	0.85	0.79
23.00	1.44	272,887	846.11	1.60	0.85	0.75
23.50	1.41	272,606	846.10	1.56	0.85	0.71
24.00	1.38	272,336	846.10	1.52	0.85	0.68

Stage-Discharge for Pond 6P: Detention Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
841.50	0.00	0.00	0.00	846.90	22.84	1.09	21.75
841.60	0.06	0.06	0.00	847.00	26.61	1.10	25.51
841.70	0.10	0.10	0.00	847.10	30.48	1.11	29.36
841.80	0.13	0.13	0.00	847.20	34.46	1.13	33.34
841.90	0.16	0.16	0.00	847.30	38.51	1.14	37.37
842.00	0.18	0.18	0.00	847.40	42.67	1.15	41.52
842.10	0.20	0.20	0.00	847.50	47.09	1.16	45.93
842.20	0.21	0.21	0.00	847.60	51.64	1.18	50.47
842.30	0.23	0.23	0.00	847.70	56.32	1.19	55.13
842.40	0.24	0.24	0.00	847.80	61.12	1.20	59.92
842.50	0.26	0.26	0.00	847.90	66.02	1.21	64.81
842.60	0.27	0.27	0.00	848.00	71.04	1.22	69.82
842.70	0.28	0.28	0.00				
842.80	0.29	0.29	0.00				
842.90	0.31	0.31	0.00				
843.00	0.32	0.32	0.00				
843.10	0.33	0.33	0.00				
843.20	0.34	0.34	0.00				
843.30	0.35	0.35	0.00				
843.40	0.36	0.36	0.00				
843.50	0.37	0.37	0.00				
843.60	0.44	0.44	0.00				
843.70	0.49	0.49	0.00				
843.80	0.53	0.53	0.00				
843.90	0.56	0.56	0.00				
844.00	0.59	0.59	0.00				
844.10	0.62	0.62	0.00				
844.20	0.64	0.64	0.00				
844.30	0.66	0.66	0.00				
844.40	0.69	0.69	0.00				
844.50	0.71	0.71	0.00				
844.60	0.72	0.72	0.00				
844.70	0.73	0.73	0.00				
844.80	0.73	0.73	0.00				
844.90	0.74	0.74	0.00				
845.00	0.75	0.75	0.00				
845.10	0.76	0.76	0.00				
845.20	0.77	0.77	0.00				
845.30	0.78	0.78	0.00				
845.40	0.79	0.79	0.00				
845.50	0.79	0.79	0.00				
845.60	0.80	0.80	0.00				
845.70	0.81	0.81	0.00				
845.80	0.82	0.82	0.00				
845.90	0.83	0.83	0.00				
846.00	0.84	0.84	0.00				
846.10	1.50	0.85	0.65				
846.20	2.75	0.86	1.89				
846.30	4.45	0.87	3.59				
846.40	6.55	0.88	5.68				
846.50	9.07	0.88	8.18				
846.60	12.00	0.94	11.06				
846.70	15.41	0.99	14.42				
846.80	19.23	1.05	18.18				

Stage-Area-Storage for Pond 6P: Detention Pond

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
841.50	50,000	0	846.90	91,333	332,267
841.60	50,400	5,020	847.00	96,667	341,667
841.70	50,800	10,080	847.10	102,000	351,600
841.80	51,200	15,180	847.20	107,333	362,067
841.90	51,600	20,320	847.30	112,667	373,067
842.00	52,000	25,500	847.40	118,000	384,600
842.10	52,400	30,720	847.50	123,333	396,667
842.20	52,800	35,980	847.60	128,667	409,267
842.30	53,200	41,280	847.70	134,000	422,400
842.40	53,600	46,620	847.80	139,333	436,067
842.50	54,000	52,000	847.90	144,667	450,267
842.60	54,400	57,420	848.00	150,000	465,000
842.70	54,800	62,880			
842.80	55,200	68,380			
842.90	55,600	73,920			
843.00	56,000	79,500			
843.10	56,400	85,120			
843.20	56,800	90,780			
843.30	57,200	96,480			
843.40	57,600	102,220			
843.50	58,000	108,000			
843.60	58,400	113,820			
843.70	58,800	119,680			
843.80	59,200	125,580			
843.90	59,600	131,520			
844.00	60,000	137,500			
844.10	60,400	143,520			
844.20	60,800	149,580			
844.30	61,200	155,680			
844.40	61,600	161,820			
844.50	62,000	168,000			
844.60	62,400	174,220			
844.70	62,800	180,480			
844.80	63,200	186,780			
844.90	63,600	193,120			
845.00	64,000	199,500			
845.10	64,400	205,920			
845.20	64,800	212,380			
845.30	65,200	218,880			
845.40	65,600	225,420			
845.50	66,000	232,000			
845.60	66,400	238,620			
845.70	66,800	245,280			
845.80	67,200	251,980			
845.90	67,600	258,720			
846.00	68,000	265,500			
846.10	68,400	272,320			
846.20	68,800	279,180			
846.30	69,200	286,080			
846.40	69,600	293,020			
846.50	70,000	300,000			
846.60	75,333	307,267			
846.70	80,667	315,067			
846.80	86,000	323,400			

RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Type II 24-hr WQ Rainfall=1.00"

Printed 11/29/2023

Page 42

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX #1	Runoff Area=0.730 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=260' Slope=0.0300 '/ Tc=45.1 min CN=60 Runoff=0.00 cfs 0.000 af
Subcatchment 2S: EX #2	Runoff Area=6.350 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=0.00 cfs 0.000 af
Subcatchment 3S: EX #3	Runoff Area=1.500 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=380' Slope=0.0200 '/ Tc=61.4 min CN=60 Runoff=0.00 cfs 0.000 af
Subcatchment 4S: EX #4	Runoff Area=16.280 ac 0.00% Impervious Runoff Depth=0.00" Flow Length=400' Slope=0.0200 '/ Tc=61.9 min CN=60 Runoff=0.00 cfs 0.000 af
Subcatchment 5S: Redwood	Runoff Area=23.601 ac 59.92% Impervious Runoff Depth>0.25" Tc=10.0 min CN=88 Runoff=8.46 cfs 0.496 af
Pond 6P: Detention Pond	Peak Elev=841.82' Storage=16,054 cf Inflow=8.46 cfs 0.496 af Discarded=0.14 cfs 0.127 af Primary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.127 af

Total Runoff Area = 48.461 ac Runoff Volume = 0.496 af Average Runoff Depth = 0.12"
70.82% Pervious = 34.320 ac 29.18% Impervious = 14.141 ac

Summary for Subcatchment 1S: EX #1

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

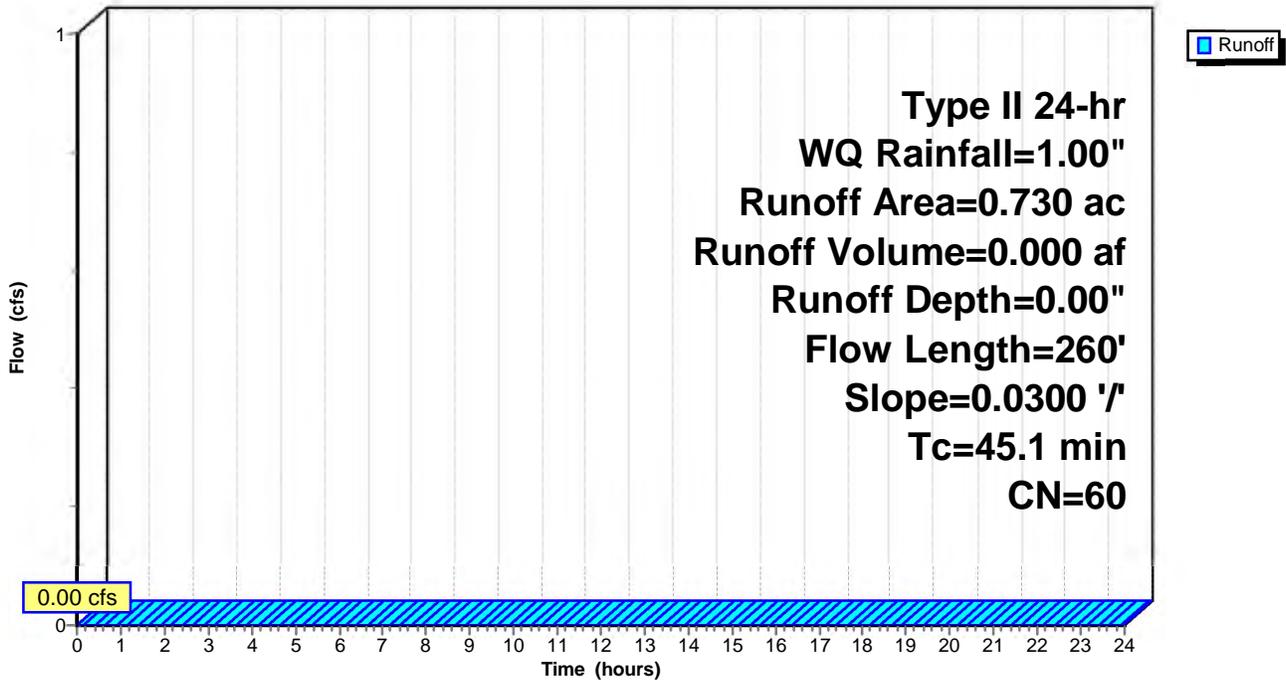
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr WQ Rainfall=1.00"

Area (ac)	CN	Description
0.730	60	Woods, Fair, HSG B
0.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.1	260	0.0300	0.10		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"

Subcatchment 1S: EX #1

Hydrograph



Hydrograph for Subcatchment 1S: EX #1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	0.80	0.00	0.00
0.25	0.00	0.00	0.00	13.75	0.81	0.00	0.00
0.50	0.01	0.00	0.00	14.00	0.82	0.00	0.00
0.75	0.01	0.00	0.00	14.25	0.83	0.00	0.00
1.00	0.01	0.00	0.00	14.50	0.84	0.00	0.00
1.25	0.01	0.00	0.00	14.75	0.85	0.00	0.00
1.50	0.02	0.00	0.00	15.00	0.85	0.00	0.00
1.75	0.02	0.00	0.00	15.25	0.86	0.00	0.00
2.00	0.02	0.00	0.00	15.50	0.87	0.00	0.00
2.25	0.03	0.00	0.00	15.75	0.87	0.00	0.00
2.50	0.03	0.00	0.00	16.00	0.88	0.00	0.00
2.75	0.03	0.00	0.00	16.25	0.89	0.00	0.00
3.00	0.03	0.00	0.00	16.50	0.89	0.00	0.00
3.25	0.04	0.00	0.00	16.75	0.90	0.00	0.00
3.50	0.04	0.00	0.00	17.00	0.90	0.00	0.00
3.75	0.04	0.00	0.00	17.25	0.91	0.00	0.00
4.00	0.05	0.00	0.00	17.50	0.91	0.00	0.00
4.25	0.05	0.00	0.00	17.75	0.92	0.00	0.00
4.50	0.06	0.00	0.00	18.00	0.92	0.00	0.00
4.75	0.06	0.00	0.00	18.25	0.93	0.00	0.00
5.00	0.06	0.00	0.00	18.50	0.93	0.00	0.00
5.25	0.07	0.00	0.00	18.75	0.93	0.00	0.00
5.50	0.07	0.00	0.00	19.00	0.94	0.00	0.00
5.75	0.08	0.00	0.00	19.25	0.94	0.00	0.00
6.00	0.08	0.00	0.00	19.50	0.95	0.00	0.00
6.25	0.08	0.00	0.00	19.75	0.95	0.00	0.00
6.50	0.09	0.00	0.00	20.00	0.95	0.00	0.00
6.75	0.09	0.00	0.00	20.25	0.96	0.00	0.00
7.00	0.10	0.00	0.00	20.50	0.96	0.00	0.00
7.25	0.10	0.00	0.00	20.75	0.96	0.00	0.00
7.50	0.11	0.00	0.00	21.00	0.96	0.00	0.00
7.75	0.11	0.00	0.00	21.25	0.97	0.00	0.00
8.00	0.12	0.00	0.00	21.50	0.97	0.00	0.00
8.25	0.13	0.00	0.00	21.75	0.97	0.00	0.00
8.50	0.13	0.00	0.00	22.00	0.98	0.00	0.00
8.75	0.14	0.00	0.00	22.25	0.98	0.00	0.00
9.00	0.15	0.00	0.00	22.50	0.98	0.00	0.00
9.25	0.16	0.00	0.00	22.75	0.99	0.00	0.00
9.50	0.16	0.00	0.00	23.00	0.99	0.00	0.00
9.75	0.17	0.00	0.00	23.25	0.99	0.00	0.00
10.00	0.18	0.00	0.00	23.50	0.99	0.00	0.00
10.25	0.19	0.00	0.00	23.75	1.00	0.00	0.00
10.50	0.20	0.00	0.00	24.00	1.00	0.00	0.00
10.75	0.22	0.00	0.00				
11.00	0.24	0.00	0.00				
11.25	0.26	0.00	0.00				
11.50	0.28	0.00	0.00				
11.75	0.39	0.00	0.00				
12.00	0.66	0.00	0.00				
12.25	0.71	0.00	0.00				
12.50	0.73	0.00	0.00				
12.75	0.76	0.00	0.00				
13.00	0.77	0.00	0.00				
13.25	0.79	0.00	0.00				

Summary for Subcatchment 2S: EX #2

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

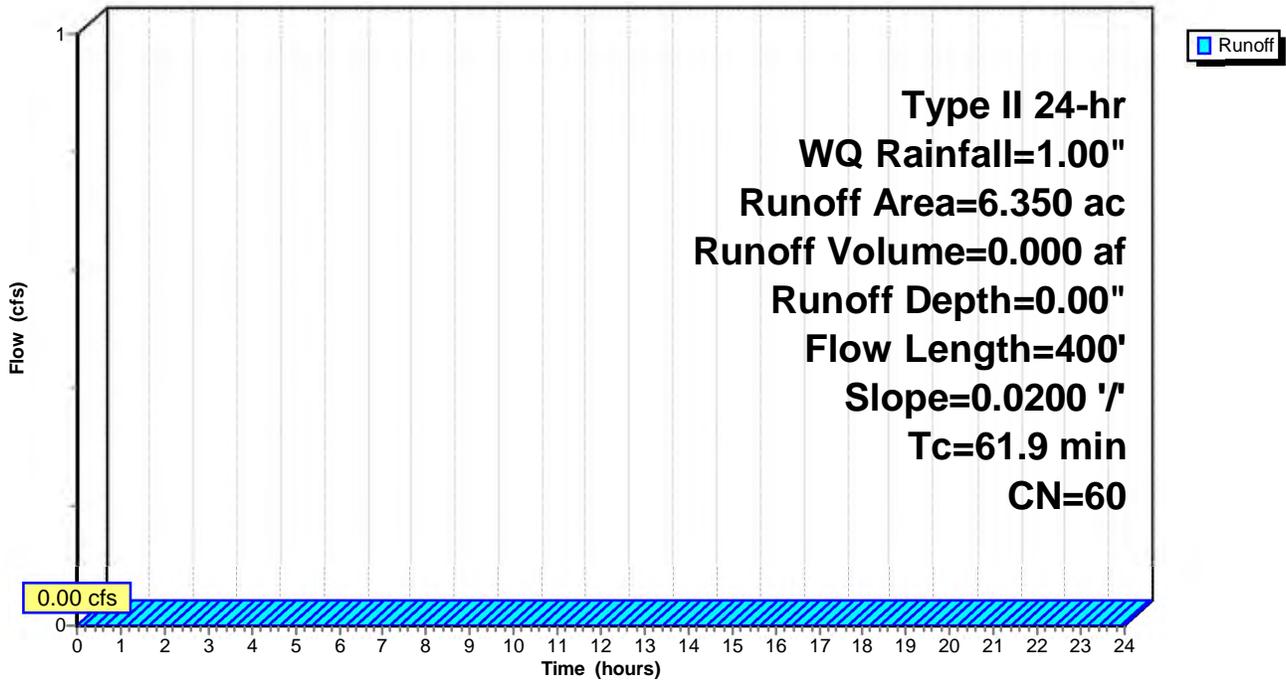
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr WQ Rainfall=1.00"

Area (ac)	CN	Description
6.350	60	Woods, Fair, HSG B
6.350		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 2S: EX #2

Hydrograph



Hydrograph for Subcatchment 2S: EX #2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	0.80	0.00	0.00
0.25	0.00	0.00	0.00	13.75	0.81	0.00	0.00
0.50	0.01	0.00	0.00	14.00	0.82	0.00	0.00
0.75	0.01	0.00	0.00	14.25	0.83	0.00	0.00
1.00	0.01	0.00	0.00	14.50	0.84	0.00	0.00
1.25	0.01	0.00	0.00	14.75	0.85	0.00	0.00
1.50	0.02	0.00	0.00	15.00	0.85	0.00	0.00
1.75	0.02	0.00	0.00	15.25	0.86	0.00	0.00
2.00	0.02	0.00	0.00	15.50	0.87	0.00	0.00
2.25	0.03	0.00	0.00	15.75	0.87	0.00	0.00
2.50	0.03	0.00	0.00	16.00	0.88	0.00	0.00
2.75	0.03	0.00	0.00	16.25	0.89	0.00	0.00
3.00	0.03	0.00	0.00	16.50	0.89	0.00	0.00
3.25	0.04	0.00	0.00	16.75	0.90	0.00	0.00
3.50	0.04	0.00	0.00	17.00	0.90	0.00	0.00
3.75	0.04	0.00	0.00	17.25	0.91	0.00	0.00
4.00	0.05	0.00	0.00	17.50	0.91	0.00	0.00
4.25	0.05	0.00	0.00	17.75	0.92	0.00	0.00
4.50	0.06	0.00	0.00	18.00	0.92	0.00	0.00
4.75	0.06	0.00	0.00	18.25	0.93	0.00	0.00
5.00	0.06	0.00	0.00	18.50	0.93	0.00	0.00
5.25	0.07	0.00	0.00	18.75	0.93	0.00	0.00
5.50	0.07	0.00	0.00	19.00	0.94	0.00	0.00
5.75	0.08	0.00	0.00	19.25	0.94	0.00	0.00
6.00	0.08	0.00	0.00	19.50	0.95	0.00	0.00
6.25	0.08	0.00	0.00	19.75	0.95	0.00	0.00
6.50	0.09	0.00	0.00	20.00	0.95	0.00	0.00
6.75	0.09	0.00	0.00	20.25	0.96	0.00	0.00
7.00	0.10	0.00	0.00	20.50	0.96	0.00	0.00
7.25	0.10	0.00	0.00	20.75	0.96	0.00	0.00
7.50	0.11	0.00	0.00	21.00	0.96	0.00	0.00
7.75	0.11	0.00	0.00	21.25	0.97	0.00	0.00
8.00	0.12	0.00	0.00	21.50	0.97	0.00	0.00
8.25	0.13	0.00	0.00	21.75	0.97	0.00	0.00
8.50	0.13	0.00	0.00	22.00	0.98	0.00	0.00
8.75	0.14	0.00	0.00	22.25	0.98	0.00	0.00
9.00	0.15	0.00	0.00	22.50	0.98	0.00	0.00
9.25	0.16	0.00	0.00	22.75	0.99	0.00	0.00
9.50	0.16	0.00	0.00	23.00	0.99	0.00	0.00
9.75	0.17	0.00	0.00	23.25	0.99	0.00	0.00
10.00	0.18	0.00	0.00	23.50	0.99	0.00	0.00
10.25	0.19	0.00	0.00	23.75	1.00	0.00	0.00
10.50	0.20	0.00	0.00	24.00	1.00	0.00	0.00
10.75	0.22	0.00	0.00				
11.00	0.24	0.00	0.00				
11.25	0.26	0.00	0.00				
11.50	0.28	0.00	0.00				
11.75	0.39	0.00	0.00				
12.00	0.66	0.00	0.00				
12.25	0.71	0.00	0.00				
12.50	0.73	0.00	0.00				
12.75	0.76	0.00	0.00				
13.00	0.77	0.00	0.00				
13.25	0.79	0.00	0.00				

Summary for Subcatchment 3S: EX #3

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

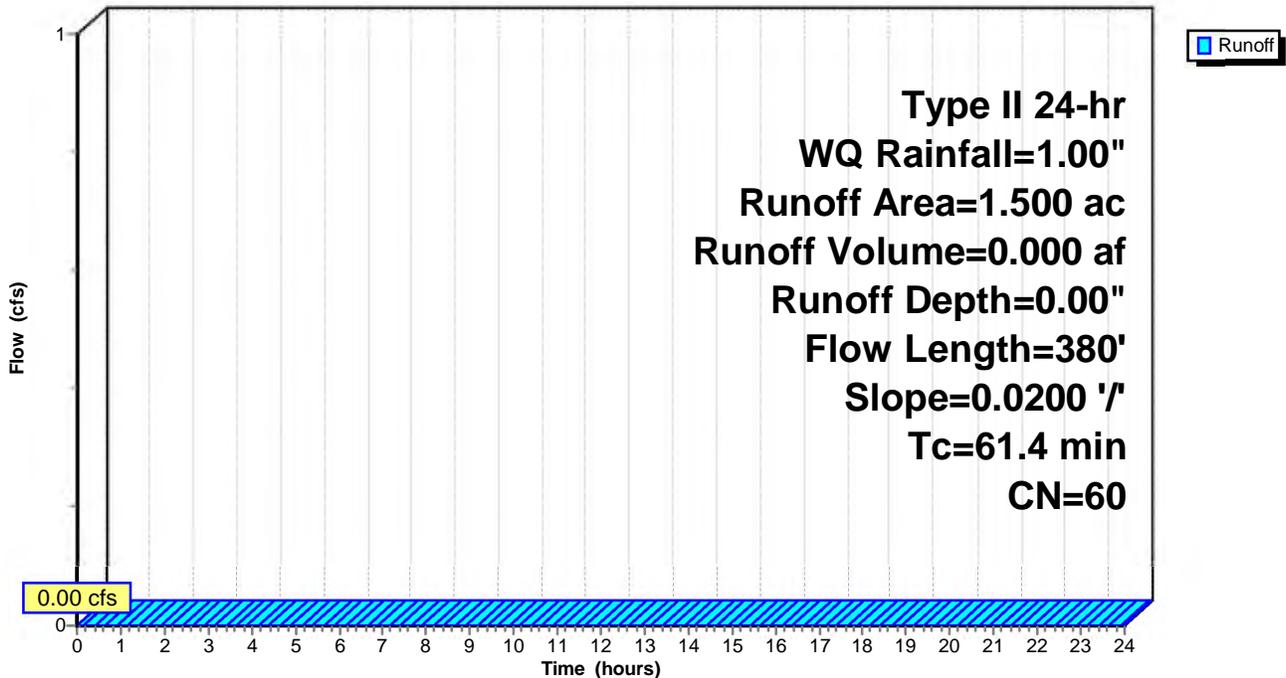
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type II 24-hr WQ Rainfall=1.00"

Area (ac)	CN	Description
1.500	60	Woods, Fair, HSG B
1.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
1.9	80	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.4	380	Total			

Subcatchment 3S: EX #3

Hydrograph



Hydrograph for Subcatchment 3S: EX #3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	0.80	0.00	0.00
0.25	0.00	0.00	0.00	13.75	0.81	0.00	0.00
0.50	0.01	0.00	0.00	14.00	0.82	0.00	0.00
0.75	0.01	0.00	0.00	14.25	0.83	0.00	0.00
1.00	0.01	0.00	0.00	14.50	0.84	0.00	0.00
1.25	0.01	0.00	0.00	14.75	0.85	0.00	0.00
1.50	0.02	0.00	0.00	15.00	0.85	0.00	0.00
1.75	0.02	0.00	0.00	15.25	0.86	0.00	0.00
2.00	0.02	0.00	0.00	15.50	0.87	0.00	0.00
2.25	0.03	0.00	0.00	15.75	0.87	0.00	0.00
2.50	0.03	0.00	0.00	16.00	0.88	0.00	0.00
2.75	0.03	0.00	0.00	16.25	0.89	0.00	0.00
3.00	0.03	0.00	0.00	16.50	0.89	0.00	0.00
3.25	0.04	0.00	0.00	16.75	0.90	0.00	0.00
3.50	0.04	0.00	0.00	17.00	0.90	0.00	0.00
3.75	0.04	0.00	0.00	17.25	0.91	0.00	0.00
4.00	0.05	0.00	0.00	17.50	0.91	0.00	0.00
4.25	0.05	0.00	0.00	17.75	0.92	0.00	0.00
4.50	0.06	0.00	0.00	18.00	0.92	0.00	0.00
4.75	0.06	0.00	0.00	18.25	0.93	0.00	0.00
5.00	0.06	0.00	0.00	18.50	0.93	0.00	0.00
5.25	0.07	0.00	0.00	18.75	0.93	0.00	0.00
5.50	0.07	0.00	0.00	19.00	0.94	0.00	0.00
5.75	0.08	0.00	0.00	19.25	0.94	0.00	0.00
6.00	0.08	0.00	0.00	19.50	0.95	0.00	0.00
6.25	0.08	0.00	0.00	19.75	0.95	0.00	0.00
6.50	0.09	0.00	0.00	20.00	0.95	0.00	0.00
6.75	0.09	0.00	0.00	20.25	0.96	0.00	0.00
7.00	0.10	0.00	0.00	20.50	0.96	0.00	0.00
7.25	0.10	0.00	0.00	20.75	0.96	0.00	0.00
7.50	0.11	0.00	0.00	21.00	0.96	0.00	0.00
7.75	0.11	0.00	0.00	21.25	0.97	0.00	0.00
8.00	0.12	0.00	0.00	21.50	0.97	0.00	0.00
8.25	0.13	0.00	0.00	21.75	0.97	0.00	0.00
8.50	0.13	0.00	0.00	22.00	0.98	0.00	0.00
8.75	0.14	0.00	0.00	22.25	0.98	0.00	0.00
9.00	0.15	0.00	0.00	22.50	0.98	0.00	0.00
9.25	0.16	0.00	0.00	22.75	0.99	0.00	0.00
9.50	0.16	0.00	0.00	23.00	0.99	0.00	0.00
9.75	0.17	0.00	0.00	23.25	0.99	0.00	0.00
10.00	0.18	0.00	0.00	23.50	0.99	0.00	0.00
10.25	0.19	0.00	0.00	23.75	1.00	0.00	0.00
10.50	0.20	0.00	0.00	24.00	1.00	0.00	0.00
10.75	0.22	0.00	0.00				
11.00	0.24	0.00	0.00				
11.25	0.26	0.00	0.00				
11.50	0.28	0.00	0.00				
11.75	0.39	0.00	0.00				
12.00	0.66	0.00	0.00				
12.25	0.71	0.00	0.00				
12.50	0.73	0.00	0.00				
12.75	0.76	0.00	0.00				
13.00	0.77	0.00	0.00				
13.25	0.79	0.00	0.00				

Summary for Subcatchment 4S: EX #4

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

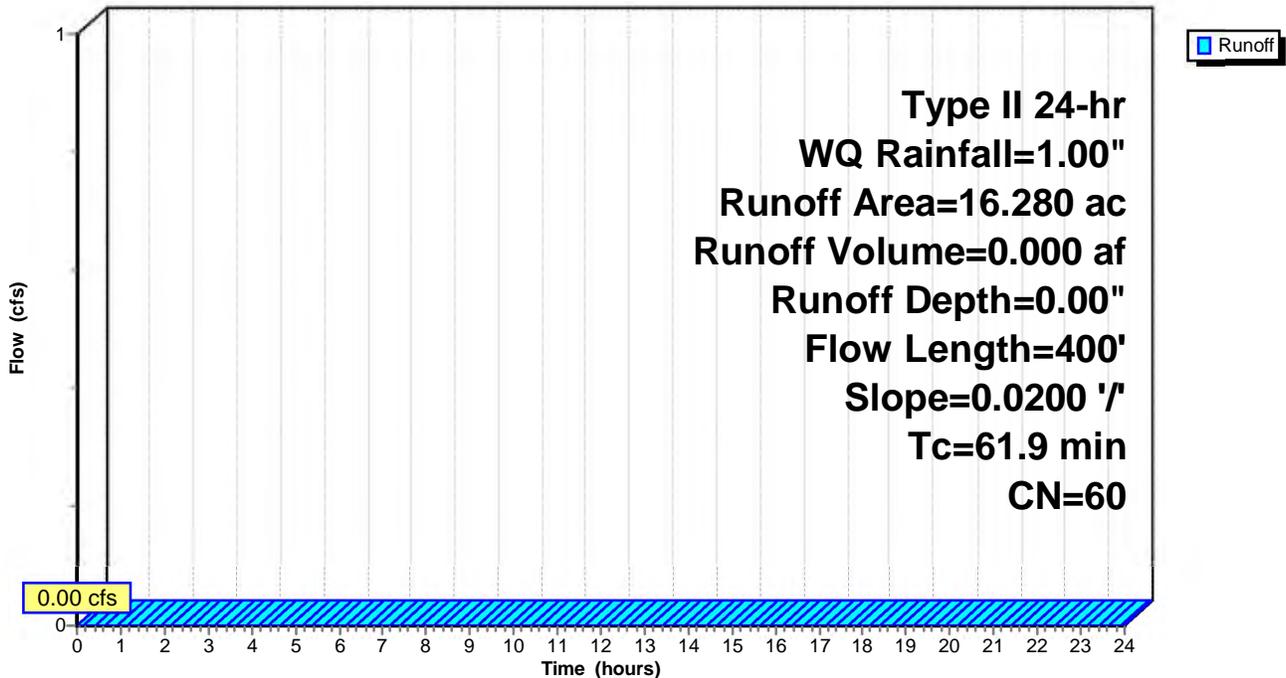
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr WQ Rainfall=1.00"

Area (ac)	CN	Description
16.280	60	Woods, Fair, HSG B
16.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.5	300	0.0200	0.08		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 2.42"
2.4	100	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
61.9	400	Total			

Subcatchment 4S: EX #4

Hydrograph



Hydrograph for Subcatchment 4S: EX #4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	0.80	0.00	0.00
0.25	0.00	0.00	0.00	13.75	0.81	0.00	0.00
0.50	0.01	0.00	0.00	14.00	0.82	0.00	0.00
0.75	0.01	0.00	0.00	14.25	0.83	0.00	0.00
1.00	0.01	0.00	0.00	14.50	0.84	0.00	0.00
1.25	0.01	0.00	0.00	14.75	0.85	0.00	0.00
1.50	0.02	0.00	0.00	15.00	0.85	0.00	0.00
1.75	0.02	0.00	0.00	15.25	0.86	0.00	0.00
2.00	0.02	0.00	0.00	15.50	0.87	0.00	0.00
2.25	0.03	0.00	0.00	15.75	0.87	0.00	0.00
2.50	0.03	0.00	0.00	16.00	0.88	0.00	0.00
2.75	0.03	0.00	0.00	16.25	0.89	0.00	0.00
3.00	0.03	0.00	0.00	16.50	0.89	0.00	0.00
3.25	0.04	0.00	0.00	16.75	0.90	0.00	0.00
3.50	0.04	0.00	0.00	17.00	0.90	0.00	0.00
3.75	0.04	0.00	0.00	17.25	0.91	0.00	0.00
4.00	0.05	0.00	0.00	17.50	0.91	0.00	0.00
4.25	0.05	0.00	0.00	17.75	0.92	0.00	0.00
4.50	0.06	0.00	0.00	18.00	0.92	0.00	0.00
4.75	0.06	0.00	0.00	18.25	0.93	0.00	0.00
5.00	0.06	0.00	0.00	18.50	0.93	0.00	0.00
5.25	0.07	0.00	0.00	18.75	0.93	0.00	0.00
5.50	0.07	0.00	0.00	19.00	0.94	0.00	0.00
5.75	0.08	0.00	0.00	19.25	0.94	0.00	0.00
6.00	0.08	0.00	0.00	19.50	0.95	0.00	0.00
6.25	0.08	0.00	0.00	19.75	0.95	0.00	0.00
6.50	0.09	0.00	0.00	20.00	0.95	0.00	0.00
6.75	0.09	0.00	0.00	20.25	0.96	0.00	0.00
7.00	0.10	0.00	0.00	20.50	0.96	0.00	0.00
7.25	0.10	0.00	0.00	20.75	0.96	0.00	0.00
7.50	0.11	0.00	0.00	21.00	0.96	0.00	0.00
7.75	0.11	0.00	0.00	21.25	0.97	0.00	0.00
8.00	0.12	0.00	0.00	21.50	0.97	0.00	0.00
8.25	0.13	0.00	0.00	21.75	0.97	0.00	0.00
8.50	0.13	0.00	0.00	22.00	0.98	0.00	0.00
8.75	0.14	0.00	0.00	22.25	0.98	0.00	0.00
9.00	0.15	0.00	0.00	22.50	0.98	0.00	0.00
9.25	0.16	0.00	0.00	22.75	0.99	0.00	0.00
9.50	0.16	0.00	0.00	23.00	0.99	0.00	0.00
9.75	0.17	0.00	0.00	23.25	0.99	0.00	0.00
10.00	0.18	0.00	0.00	23.50	0.99	0.00	0.00
10.25	0.19	0.00	0.00	23.75	1.00	0.00	0.00
10.50	0.20	0.00	0.00	24.00	1.00	0.00	0.00
10.75	0.22	0.00	0.00				
11.00	0.24	0.00	0.00				
11.25	0.26	0.00	0.00				
11.50	0.28	0.00	0.00				
11.75	0.39	0.00	0.00				
12.00	0.66	0.00	0.00				
12.25	0.71	0.00	0.00				
12.50	0.73	0.00	0.00				
12.75	0.76	0.00	0.00				
13.00	0.77	0.00	0.00				
13.25	0.79	0.00	0.00				

Summary for Subcatchment 5S: Redwood

Runoff = 8.46 cfs @ 12.03 hrs, Volume= 0.496 af, Depth> 0.25"

Routed to Pond 6P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

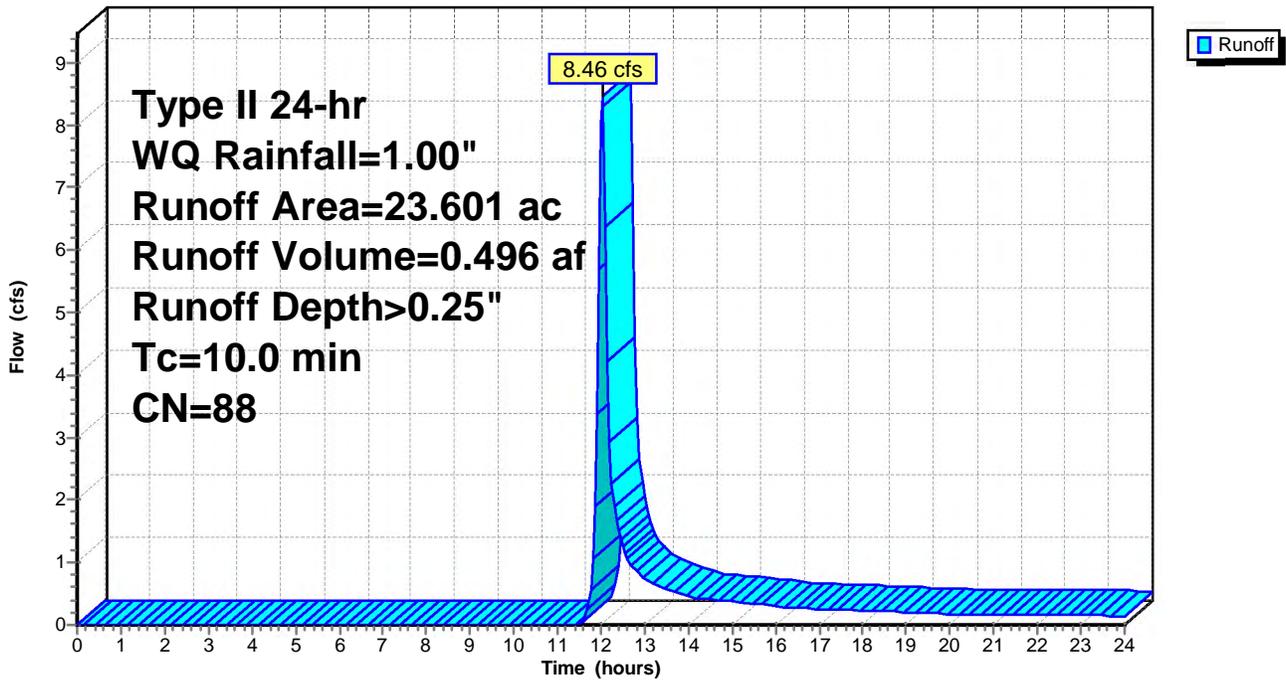
Type II 24-hr WQ Rainfall=1.00"

Area (ac)	CN	Description
14.141	98	Paved parking, HSG C
9.460	74	>75% Grass cover, Good, HSG C
23.601	88	Weighted Average
9.460		40.08% Pervious Area
14.141		59.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry,

Subcatchment 5S: Redwood

Hydrograph



RedwoodMeridian

Prepared by Colliers Engineering & Design

HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

Type II 24-hr WQ Rainfall=1.00"

Printed 11/29/2023

Page 52

Hydrograph for Subcatchment 5S: Redwood

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.50	0.80	0.15	0.58
0.25	0.00	0.00	0.00	13.75	0.81	0.15	0.52
0.50	0.01	0.00	0.00	14.00	0.82	0.16	0.47
0.75	0.01	0.00	0.00	14.25	0.83	0.16	0.43
1.00	0.01	0.00	0.00	14.50	0.84	0.17	0.41
1.25	0.01	0.00	0.00	14.75	0.85	0.17	0.39
1.50	0.02	0.00	0.00	15.00	0.85	0.17	0.37
1.75	0.02	0.00	0.00	15.25	0.86	0.18	0.36
2.00	0.02	0.00	0.00	15.50	0.87	0.18	0.34
2.25	0.03	0.00	0.00	15.75	0.87	0.18	0.32
2.50	0.03	0.00	0.00	16.00	0.88	0.19	0.30
2.75	0.03	0.00	0.00	16.25	0.89	0.19	0.28
3.00	0.03	0.00	0.00	16.50	0.89	0.19	0.28
3.25	0.04	0.00	0.00	16.75	0.90	0.20	0.27
3.50	0.04	0.00	0.00	17.00	0.90	0.20	0.26
3.75	0.04	0.00	0.00	17.25	0.91	0.20	0.26
4.00	0.05	0.00	0.00	17.50	0.91	0.20	0.25
4.25	0.05	0.00	0.00	17.75	0.92	0.21	0.24
4.50	0.06	0.00	0.00	18.00	0.92	0.21	0.24
4.75	0.06	0.00	0.00	18.25	0.93	0.21	0.23
5.00	0.06	0.00	0.00	18.50	0.93	0.21	0.22
5.25	0.07	0.00	0.00	18.75	0.93	0.22	0.21
5.50	0.07	0.00	0.00	19.00	0.94	0.22	0.21
5.75	0.08	0.00	0.00	19.25	0.94	0.22	0.20
6.00	0.08	0.00	0.00	19.50	0.95	0.22	0.19
6.25	0.08	0.00	0.00	19.75	0.95	0.22	0.18
6.50	0.09	0.00	0.00	20.00	0.95	0.23	0.18
6.75	0.09	0.00	0.00	20.25	0.96	0.23	0.17
7.00	0.10	0.00	0.00	20.50	0.96	0.23	0.17
7.25	0.10	0.00	0.00	20.75	0.96	0.23	0.17
7.50	0.11	0.00	0.00	21.00	0.96	0.23	0.17
7.75	0.11	0.00	0.00	21.25	0.97	0.23	0.17
8.00	0.12	0.00	0.00	21.50	0.97	0.24	0.16
8.25	0.13	0.00	0.00	21.75	0.97	0.24	0.16
8.50	0.13	0.00	0.00	22.00	0.98	0.24	0.16
8.75	0.14	0.00	0.00	22.25	0.98	0.24	0.16
9.00	0.15	0.00	0.00	22.50	0.98	0.24	0.16
9.25	0.16	0.00	0.00	22.75	0.99	0.24	0.16
9.50	0.16	0.00	0.00	23.00	0.99	0.25	0.16
9.75	0.17	0.00	0.00	23.25	0.99	0.25	0.16
10.00	0.18	0.00	0.00	23.50	0.99	0.25	0.15
10.25	0.19	0.00	0.00	23.75	1.00	0.25	0.15
10.50	0.20	0.00	0.00	24.00	1.00	0.25	0.15
10.75	0.22	0.00	0.00				
11.00	0.24	0.00	0.00				
11.25	0.26	0.00	0.00				
11.50	0.28	0.00	0.00				
11.75	0.39	0.01	0.56				
12.00	0.66	0.09	8.03				
12.25	0.71	0.10	2.27				
12.50	0.73	0.12	1.26				
12.75	0.76	0.13	0.88				
13.00	0.77	0.13	0.75				
13.25	0.79	0.14	0.65				

Summary for Pond 6P: Detention Pond

Inflow Area = 23.601 ac, 59.92% Impervious, Inflow Depth > 0.25" for WQ event
 Inflow = 8.46 cfs @ 12.03 hrs, Volume= 0.496 af
 Outflow = 0.14 cfs @ 24.00 hrs, Volume= 0.127 af, Atten= 98%, Lag= 718.1 min
 Discarded = 0.14 cfs @ 24.00 hrs, Volume= 0.127 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 841.82' @ 24.00 hrs Surf.Area= 51,268 sf Storage= 16,054 cf

Plug-Flow detention time= 378.3 min calculated for 0.127 af (26% of inflow)
 Center-of-Mass det. time= 221.4 min (1,097.3 - 875.9)

Volume	Invert	Avail.Storage	Storage Description
#1	841.50'	465,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
841.50	50,000	0	0
842.50	54,000	52,000	52,000
843.50	58,000	56,000	108,000
844.50	62,000	60,000	168,000
845.50	66,000	64,000	232,000
846.50	70,000	68,000	300,000
848.00	150,000	165,000	465,000

Device	Routing	Invert	Outlet Devices
#1	Discarded	841.50'	0.400 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 830.00'
#2	Primary	846.00'	7.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Primary	846.00'	12.0" Round RCP_Round 12" L= 50.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 846.00' / 845.70' S= 0.0060 '/ Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#4	Device 1	841.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads
#5	Device 1	843.50'	1.0" Vert. Orifice/Grate X 10.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.14 cfs @ 24.00 hrs HW=841.82' (Free Discharge)

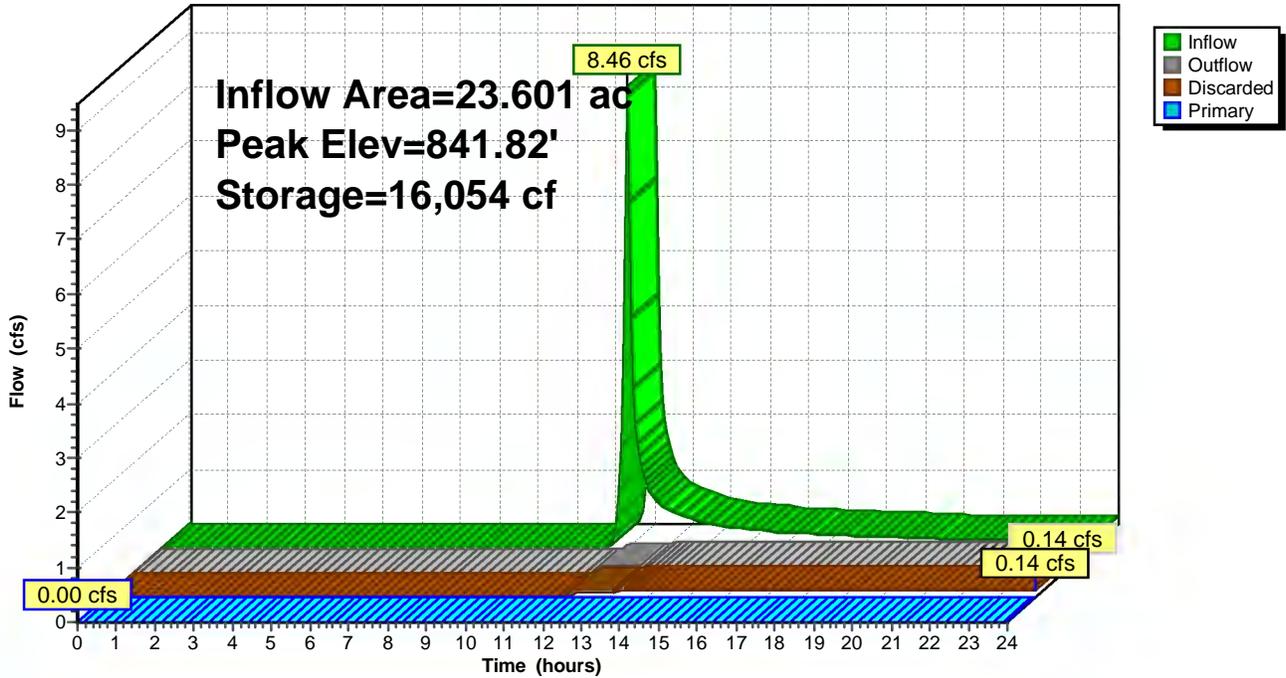
- ↑ 1=Exfiltration (Passes 0.14 cfs of 0.49 cfs potential flow)
- ↑ 4=Orifice/Grate (Orifice Controls 0.14 cfs @ 2.53 fps)
- ↑ 5=Orifice/Grate (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=841.50' (Free Discharge)

- ↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- ↑ 3=RCP_Round 12" (Controls 0.00 cfs)

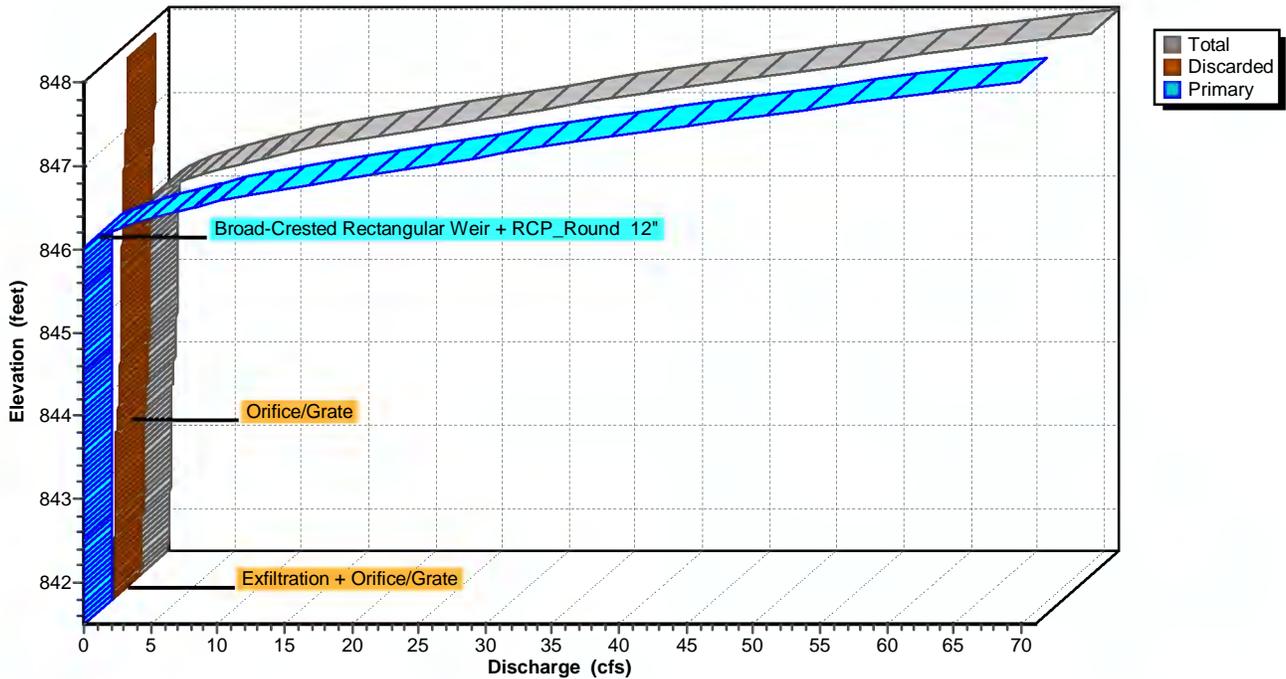
Pond 6P: Detention Pond

Hydrograph



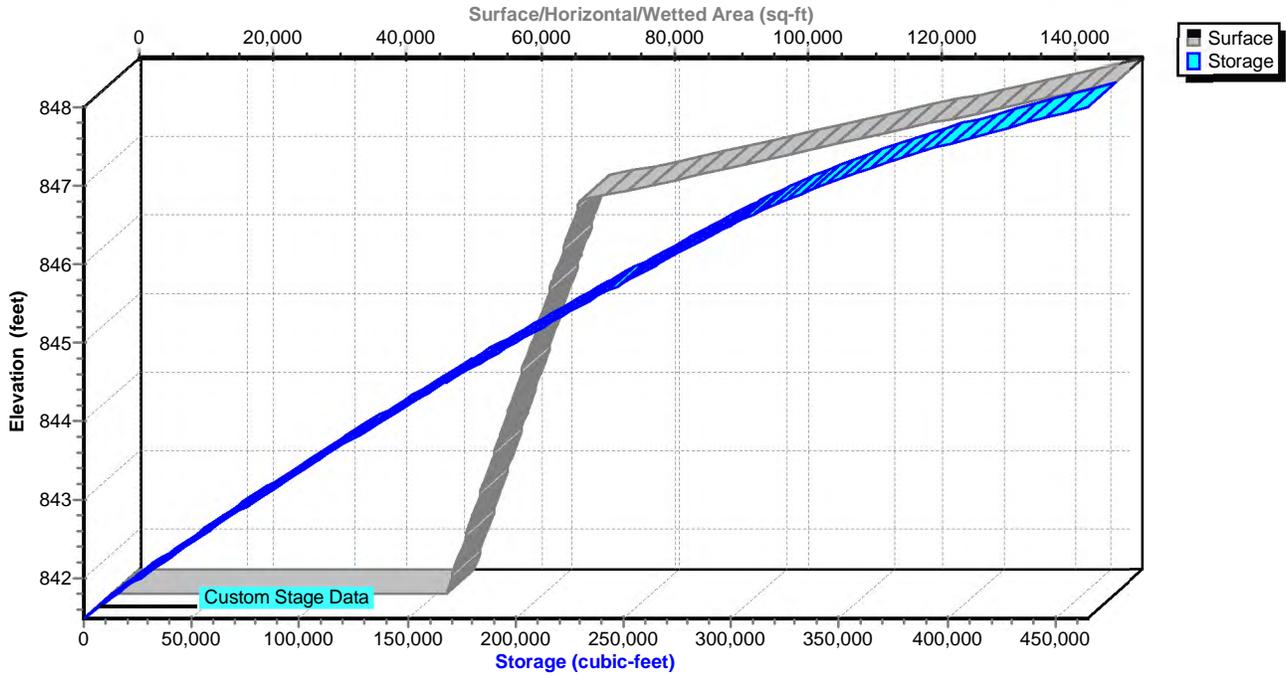
Pond 6P: Detention Pond

Stage-Discharge



Pond 6P: Detention Pond

Stage-Area-Storage



Hydrograph for Pond 6P: Detention Pond

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	841.50	0.00	0.00	0.00
0.50	0.00	0	841.50	0.00	0.00	0.00
1.00	0.00	0	841.50	0.00	0.00	0.00
1.50	0.00	0	841.50	0.00	0.00	0.00
2.00	0.00	0	841.50	0.00	0.00	0.00
2.50	0.00	0	841.50	0.00	0.00	0.00
3.00	0.00	0	841.50	0.00	0.00	0.00
3.50	0.00	0	841.50	0.00	0.00	0.00
4.00	0.00	0	841.50	0.00	0.00	0.00
4.50	0.00	0	841.50	0.00	0.00	0.00
5.00	0.00	0	841.50	0.00	0.00	0.00
5.50	0.00	0	841.50	0.00	0.00	0.00
6.00	0.00	0	841.50	0.00	0.00	0.00
6.50	0.00	0	841.50	0.00	0.00	0.00
7.00	0.00	0	841.50	0.00	0.00	0.00
7.50	0.00	0	841.50	0.00	0.00	0.00
8.00	0.00	0	841.50	0.00	0.00	0.00
8.50	0.00	0	841.50	0.00	0.00	0.00
9.00	0.00	0	841.50	0.00	0.00	0.00
9.50	0.00	0	841.50	0.00	0.00	0.00
10.00	0.00	0	841.50	0.00	0.00	0.00
10.50	0.00	0	841.50	0.00	0.00	0.00
11.00	0.00	0	841.50	0.00	0.00	0.00
11.50	0.00	0	841.50	0.00	0.00	0.00
12.00	8.03	3,051	841.56	0.04	0.04	0.00
12.50	1.26	9,238	841.68	0.10	0.10	0.00
13.00	0.75	10,715	841.71	0.11	0.11	0.00
13.50	0.58	11,695	841.73	0.11	0.11	0.00
14.00	0.47	12,420	841.75	0.12	0.12	0.00
14.50	0.41	12,978	841.76	0.12	0.12	0.00
15.00	0.37	13,462	841.77	0.12	0.12	0.00
15.50	0.34	13,876	841.77	0.13	0.13	0.00
16.00	0.30	14,218	841.78	0.13	0.13	0.00
16.50	0.28	14,498	841.79	0.13	0.13	0.00
17.00	0.26	14,749	841.79	0.13	0.13	0.00
17.50	0.25	14,975	841.80	0.13	0.13	0.00
18.00	0.24	15,173	841.80	0.13	0.13	0.00
18.50	0.22	15,345	841.80	0.13	0.13	0.00
19.00	0.21	15,488	841.81	0.13	0.13	0.00
19.50	0.19	15,604	841.81	0.14	0.14	0.00
20.00	0.18	15,691	841.81	0.14	0.14	0.00
20.50	0.17	15,756	841.81	0.14	0.14	0.00
21.00	0.17	15,814	841.81	0.14	0.14	0.00
21.50	0.16	15,867	841.81	0.14	0.14	0.00
22.00	0.16	15,915	841.81	0.14	0.14	0.00
22.50	0.16	15,958	841.82	0.14	0.14	0.00
23.00	0.16	15,995	841.82	0.14	0.14	0.00
23.50	0.15	16,028	841.82	0.14	0.14	0.00
24.00	0.15	16,055	841.82	0.14	0.14	0.00

Stage-Discharge for Pond 6P: Detention Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
841.50	0.00	0.00	0.00	846.90	22.84	1.09	21.75
841.60	0.06	0.06	0.00	847.00	26.61	1.10	25.51
841.70	0.10	0.10	0.00	847.10	30.48	1.11	29.36
841.80	0.13	0.13	0.00	847.20	34.46	1.13	33.34
841.90	0.16	0.16	0.00	847.30	38.51	1.14	37.37
842.00	0.18	0.18	0.00	847.40	42.67	1.15	41.52
842.10	0.20	0.20	0.00	847.50	47.09	1.16	45.93
842.20	0.21	0.21	0.00	847.60	51.64	1.18	50.47
842.30	0.23	0.23	0.00	847.70	56.32	1.19	55.13
842.40	0.24	0.24	0.00	847.80	61.12	1.20	59.92
842.50	0.26	0.26	0.00	847.90	66.02	1.21	64.81
842.60	0.27	0.27	0.00	848.00	71.04	1.22	69.82
842.70	0.28	0.28	0.00				
842.80	0.29	0.29	0.00				
842.90	0.31	0.31	0.00				
843.00	0.32	0.32	0.00				
843.10	0.33	0.33	0.00				
843.20	0.34	0.34	0.00				
843.30	0.35	0.35	0.00				
843.40	0.36	0.36	0.00				
843.50	0.37	0.37	0.00				
843.60	0.44	0.44	0.00				
843.70	0.49	0.49	0.00				
843.80	0.53	0.53	0.00				
843.90	0.56	0.56	0.00				
844.00	0.59	0.59	0.00				
844.10	0.62	0.62	0.00				
844.20	0.64	0.64	0.00				
844.30	0.66	0.66	0.00				
844.40	0.69	0.69	0.00				
844.50	0.71	0.71	0.00				
844.60	0.72	0.72	0.00				
844.70	0.73	0.73	0.00				
844.80	0.73	0.73	0.00				
844.90	0.74	0.74	0.00				
845.00	0.75	0.75	0.00				
845.10	0.76	0.76	0.00				
845.20	0.77	0.77	0.00				
845.30	0.78	0.78	0.00				
845.40	0.79	0.79	0.00				
845.50	0.79	0.79	0.00				
845.60	0.80	0.80	0.00				
845.70	0.81	0.81	0.00				
845.80	0.82	0.82	0.00				
845.90	0.83	0.83	0.00				
846.00	0.84	0.84	0.00				
846.10	1.50	0.85	0.65				
846.20	2.75	0.86	1.89				
846.30	4.45	0.87	3.59				
846.40	6.55	0.88	5.68				
846.50	9.07	0.88	8.18				
846.60	12.00	0.94	11.06				
846.70	15.41	0.99	14.42				
846.80	19.23	1.05	18.18				

Stage-Area-Storage for Pond 6P: Detention Pond

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
841.50	50,000	0	846.90	91,333	332,267
841.60	50,400	5,020	847.00	96,667	341,667
841.70	50,800	10,080	847.10	102,000	351,600
841.80	51,200	15,180	847.20	107,333	362,067
841.90	51,600	20,320	847.30	112,667	373,067
842.00	52,000	25,500	847.40	118,000	384,600
842.10	52,400	30,720	847.50	123,333	396,667
842.20	52,800	35,980	847.60	128,667	409,267
842.30	53,200	41,280	847.70	134,000	422,400
842.40	53,600	46,620	847.80	139,333	436,067
842.50	54,000	52,000	847.90	144,667	450,267
842.60	54,400	57,420	848.00	150,000	465,000
842.70	54,800	62,880			
842.80	55,200	68,380			
842.90	55,600	73,920			
843.00	56,000	79,500			
843.10	56,400	85,120			
843.20	56,800	90,780			
843.30	57,200	96,480			
843.40	57,600	102,220			
843.50	58,000	108,000			
843.60	58,400	113,820			
843.70	58,800	119,680			
843.80	59,200	125,580			
843.90	59,600	131,520			
844.00	60,000	137,500			
844.10	60,400	143,520			
844.20	60,800	149,580			
844.30	61,200	155,680			
844.40	61,600	161,820			
844.50	62,000	168,000			
844.60	62,400	174,220			
844.70	62,800	180,480			
844.80	63,200	186,780			
844.90	63,600	193,120			
845.00	64,000	199,500			
845.10	64,400	205,920			
845.20	64,800	212,380			
845.30	65,200	218,880			
845.40	65,600	225,420			
845.50	66,000	232,000			
845.60	66,400	238,620			
845.70	66,800	245,280			
845.80	67,200	251,980			
845.90	67,600	258,720			
846.00	68,000	265,500			
846.10	68,400	272,320			
846.20	68,800	279,180			
846.30	69,200	286,080			
846.40	69,600	293,020			
846.50	70,000	300,000			
846.60	75,333	307,267			
846.70	80,667	315,067			
846.80	86,000	323,400			



To: Board Members

From: Timothy R. Schmitt, *AICP*
Director of Community Planning and Development

Date: November 30, 2023

Re: Text Amendment 2023-08 – CV, Conservancy District Update - INTRODUCTION

At the November 21, 2023 Township Board meeting, the Board held an initial discussion on the Staff initiated changes to the CV, Conservancy District. As a reminder, with this change, decks would be permitted by right, which is currently not the case. Additionally, the Township Floodplain Administrator would be able to administratively approve projects with less than ten cubic yards of fill. Compensating cut is still required in all circumstances where there is fill in the floodplain.

The Planning Commission has previously reviewed the ordinance and held a public hearing on the matter. No concerns were raised the Commission recommended approval to the Township Board by a unanimous vote. The Township Board raised no major concerns during their discussion on the 21st and directed Staff to bring the matter back for formal introduction

Move to adopt the resolution approving for introduction Zoning Amendment 2023-08 to amend Article IV of the Zoning Ordinance of the Charter Township of Meridian to update the standards of the CV, Conservancy District.

Attachments

1. Resolution to approve Ordinance 2023-08 for introduction
2. Ordinance 2023-08 – Final Version

RESOLUTION TO APPROVE - INTRODUCTION

**Text Amendment 2023-08
CV, Conservancy District Update**

RESOLUTION

At a regular meeting of the Township Board of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 5th day of December 2023, at 6:00 p.m., Local Time.

PRESENT: _____

ABSENT: _____

The following resolution was offered by _____ and supported by _____.

WHEREAS, Staff has previously discussed minor changes to the CV, Conservancy District, with the Planning Commission, as it relates to very small impacts (under 10 cubic yards) to the floodplain; and

WHEREAS, the Planning Commission held a public hearing on the draft ordinance on October 23, 2023 and recommended approval of the changes to the Township Board at their November 13, 2023 meeting; and

WHEREAS, the draft ordinance would add decks as uses permitted by right in floodway areas; and

WHEREAS, the draft ordinance would allow the Township Floodplain Administrator to administratively approve projects that incorporate fill less than or equal to ten cubic yards.

NOW THEREFORE, BE IT RESOLVED THE TOWNSHIP BOARD OF THE CHARTER TOWNSHIP OF MERIDIAN hereby INTRODUCES FOR PUBLICATION AND SUBSEQUENT ADOPTION Ordinance No. 2023-08, entitled "An Ordinance to amend the code of ordinances of the Charter Township of Meridian to update standards in Section 86-436, Conservancy District, to allow limited administrative review."; and

BE IT FURTHER RESOLVED that the Clerk of the Charter Township of Meridian is directed to publish the Ordinance in the form in which it was adopted.

ADOPTED: YEAS: _____

NAYS: _____

ORDINANCE NO. 2023-08

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CHARTER TOWNSHIP OF MERIDIAN TO UPDATE STANDARDS IN SECTION 86-436 – CONSERVANCY DISTRICT TO ALLOW LIMITED ADMINISTRATIVE REVIEW

THE CHARTER TOWNSHIP OF MERIDIAN ORDAINS:

Section 1. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (b) as follows:

(b) Definitions.

~~DEVELOPMENT. Any man made change to improved or unimproved real estate, including, but not limited to, buildings, or other structures, mining, dredging, filling, grading, paving, excavation or drilling operation.~~

FLOODPLAIN. The area of land adjoining a lake or watercourse within the Township subject to a 1 percent or greater chance of flooding in any given year, also known as the Special Flood Hazard Area. Riverine floodplains, those along rivers and drains, are composed of both the floodway and the floodway fringe.

FLOODWAY. The channel of a riverine watercourse and those portions of the floodplain which are reasonably required to carry and discharge the base flood. The boundary of the floodway is designated on the current Flood Insurance Rate Maps from FEMA.

~~PERSON. A firm, association, organization, partnership, trust, estate, company, corporation, joint venture, political subdivision, or body of individuals, as well as an individual.~~

SUBSTANTIAL IMPROVEMENT. Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. Substantial improvement includes buildings that have incurred "substantial damage," regardless of the actual repair work performed. For substantial improvement, the term "start of construction" means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not the alteration affects the external dimensions of the building. The term "substantial improvement" does not include the following:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.
2. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

~~**WATERCOURSE.** Any natural or artificial watercourse, stream, river, creek, ditch, channel, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows in a definite direction or course, either continuously or intermittently and which has a definite channel, bed and banks and shall include any area adjacent thereto subject to inundation by reason of overflow or floodwater.~~

Section 2. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (d) as follows:

(d) Conservancy district areas. The conservancy district shall be considered to overlay existing zoning districts and shall constitute additional terms over and above those imposed by the underlying zoning districts. The conservancy district within the jurisdiction of this section is hereby divided into three areas: groundwater recharge areas, floodway areas, and floodway fringe areas. The location and boundaries of the floodway and floodway fringe areas shall coincide with those locations and boundaries for floodways and floodway fringe areas as shown on the most recently approved Flood Insurance Rate Map as published by the Federal Emergency Management Agency (FEMA).

Section 3. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (e) as follows:

(e) General provisions of the floodplain areas of the conservancy district. The restrictions listed in this subsection constitute those general provisions which shall govern development, construction, improvement, and relocation within the floodplain areas of the conservancy district.

(1) All persons proposing development within the floodplain areas shall obtain approved permits from those government agencies having jurisdiction over floodplain development. No building permit or occupancy permit shall be issued until all such aforementioned permits have been obtained and have been reviewed by the Department of Community Planning and Development.

(2) Developers of new, substantially improved, or relocated structures within the floodplain areas shall submit to the Department of Community Planning and Development a written document indicating:

- a. The elevation of the lowest floor including basement(s) in the structure.
- b. The elevation to which a structure has been floodproofed, if floodproofing methods have been employed.

Details of specifications proposed and as-built drawings shall be kept on record and will be available for public inspection and for use in determining flood insurance risk premium rates.

- (3) [UNCHANGED]
- (4) [UNCHANGED]
- (5) [UNCHANGED]
- (6) [UNCHANGED]
- (7) [UNCHANGED]
- (8) [UNCHANGED]
- (9) [UNCHANGED]
- (10) [UNCHANGED]
- (11) [UNCHANGED]
- (12) [UNCHANGED]
- (13) [UNCHANGED]

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51

Section 4. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (f) as follows:

(f) Permitted uses by right in the floodway area of the conservancy district. The following uses having a low flood damage potential and presenting no or minimal obstruction to flood flows shall be permitted within the floodway district to the extent that they are not prohibited by any other ordinance and provided they do not require structures, storage of materials or equipment, fill, or alteration of the preexisting grade. No use shall in any manner adversely affect or reduce the capacity of the channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility or system. Approval from the state department of environmental quality is needed for construction activity taking place in the floodway.

- 1) [UNCHANGED]
- 2) [UNCHANGED]
- 3) [UNCHANGED]
- 4) [UNCHANGED]
- 5) [UNCHANGED]
- 6) Decks, provided the following conditions:
 - a. Any deck with foundational elements located within the floodplain shall be structurally independent from the residential structure.
 - b. Any deck with foundational elements located within the floodplain requires a floodplain (Part 31) permit from the Michigan Department of Environment, Great Lakes, and Energy. A copy of such permit shall be provided to Meridian Township.
 - c. Any deck, or portion thereof, located within the floodplain may not be enclosed beneath, or within one foot above the Base Flood Elevation.

Section 5. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (g) as follows:

(g) Uses permitted by special use permit in the floodway area of the conservancy district. Provided such uses shall not be adverse to the purpose of this section or damaging to the public health, safety, or welfare, or impose a financial burden upon the community, or shall in any manner adversely affect or reduce the capacity of the channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility or system, the following uses may be permitted by issuance of a special use permit in accordance with Article **II**, Division 4 of this chapter and any other requirements stipulated in this section:

- (1) [UNCHANGED]
- (2) [UNCHANGED]
- (3) [UNCHANGED]
- (4) [UNCHANGED]
- (5) [UNCHANGED]
- (6) Uses described in § **86-436(f)** which incorporate fill greater than ten cubic yards and are to be constructed above the preexisting grade.

Section 6. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (k) as follows:

(k) Permitted uses by right in the floodway fringe area of the conservancy district. The following uses having a low flood damage potential and presenting no or minimal obstruction to flood flows shall be permitted within the floodway fringe district to the extent that they are not prohibited by any other ordinance and provided they do not require structures, storage of materials or equipment, fill, or alteration of the preexisting grade. Approval from the state department of environmental quality is needed for construction activity taking place in the floodway fringe.

(1) [UNCHANGED]

(2) [UNCHANGED]

(3) [UNCHANGED]

(4) [UNCHANGED]

(5) [UNCHANGED]

(6) Decks, provided the following conditions:

a. Any deck with foundational elements located within the floodplain shall be structurally independent from the residential structure.

b. Any deck with foundational elements located within the floodplain requires a floodplain (Part 31) permit from the Michigan Department of Environment, Great Lakes, and Energy. A copy of such permit shall be provided to Meridian Township.

c. Any deck, or portion thereof, located within the floodplain may not be enclosed beneath, or within one foot above the Base Flood Elevation.

Section 7. Section 86-436, CV District: Conservancy District, is hereby amended at Subsection (l) as follows:

(l) Uses permitted by special use permit in the floodway fringe area of the conservancy district. Provided such uses shall not be adverse to the purpose of this section or damaging to the public health, safety, or welfare or impose a financial burden upon the community, the following uses may be permitted by issuance of a special use permit in accordance with Article II, Division 4 of this chapter and any other requirements stipulated in this section:

(1) [UNCHANGED]

(2) [UNCHANGED]

(3) [UNCHANGED]

(4) [UNCHANGED]

(5) [UNCHANGED]

(6) [UNCHANGED]

(7) [UNCHANGED]

(8) Uses described in § **86-436(k)** which incorporate fill greater than ten cubic yards and are to be constructed above the preexisting grade.

Section 8. Section 86-436, CV District: Conservancy District, is hereby amended to add Subsection (x) as follows:

(x) Uses permitted by Administrative Review. Uses described in § **86-436(f)** or § **86-436(k)** which incorporate fill less than or equal to ten cubic yards and are to be constructed above the preexisting grade shall be subject to administrative review and approval by the Township Floodplain Administrator. All other requirements of Section 86-436 shall apply.

1 **Section 9.** Validity and Severability. The provisions of this Ordinance are severable and the
2 invalidity of any phrase, clause or part of this Ordinance shall not affect the validity
3 or effectiveness of the remainder of the Ordinance.
4

5 **Section 10.** Repealer Clause. All ordinances or parts of ordinances in conflict therewith are
6 hereby repealed only to the extent necessary to give this Ordinance full force and
7 effect.
8

9 **Section 11.** Savings Clause. This Ordinance does not affect rights and duties matured, penalties
10 that were incurred, and proceedings that were begun, before its effective date.
11

12 **Section 12.** Effective Date. This Ordinance shall be effective seven (7) days after its publication
13 or upon such later date as may be required under Section 402 of the Michigan Zoning
14 Enabling Act (MCL 125.3402) after filing of a notice of intent to file a petition for a
15 referendum.
16

17 ADOPTED by the Charter Township of Meridian Board at its regular meeting this **XX**th day of
18 **XXXXXXX**, 2023.
19

20
21
22 Patricia Herring Jackson, Township Supervisor
23

24
25
26 Deborah Guthrie, Township Clerk
27
28



To: Board Members
From: Trustee Scott Hendrickson, Trustee Marna Wilson, and Clerk Deborah Guthrie
Date: November 28, 2023
Re: Memorandum to Create Paid Parental Leave Program for Meridian Township

In October of 2020, Governor Gretchen Whitmer implemented Paid Parental Leave for all State of Michigan employees, allowing new parents up to 12 weeks of paid time off after the birth or adoption of their child.

In the first year of implementation, over 1,000 state workers took advantage of the program and it has received rave reviews from State Employees, improving morale and employee satisfaction while providing financial stability and security and also helped with employee recruitment and retention.

The parental leave program is available to mothers and fathers of newborn children and adoptive parents of children up to five years old. In order to be eligible for leave, the applicants must have completed their probationary period with the State and must be named on the adoption papers or birth certificate.

The family-first nature of our management team encourages new parents to take time with their newborns already. Financially, the Township budgets for full salaries and benefits for our employees regardless of whether they are at work or on parental leave. Thus, the financial impact will be quite minimal.

In consultation with the Township Manager, this program would have an indeterminant effect on the operations of the Township, with efficient teams and little backup. While our goal is to reach the full 12 weeks offered by FMLA in the future, we recognize that this may have a negative effect on our staffing and may result in significant overtime by other employees. As such, in order to determine the impact on Township staff, we have decided to launch this new program as a Pilot program in 2024.

Move to Adopt the Paid Parental Leave Program for Meridian Township for a Pilot Program starting January 1, 2024.

This policy provides eligible Meridian Township (Township) employees with the opportunity to be provided up to four (4) weeks of Parental Paid Leave Time for the birth of a child, or placement of a child with you for adoption.

1. Eligibility:

- A. Must be a permanent full-time employee with twelve (12) months of service accrued.
- B. Employee must be the biological parent who has given birth to a new child, the spouse of that biological parent, or committed partner of that biological parent, OR be the legally designated guardian of a minor child up to and including age 5 who is newly adopted. The adoption of a spouse's child is not eligible for this benefit.
- C. Employee must not have taken any Parental Paid Leave Time under this policy in the 12-month period immediately preceding the date Paid Leave begins.
- D. Parental Paid Leave is predicated on the understanding that the employee will return to work after the conclusion of the Parental Paid Leave time. If it is known that the employee will not be returning to work following the leave, this benefit may be denied or discontinued. An employee who fails to return to work on or before the conclusion of their approved Parental Paid Leave period shall be deemed to have voluntarily resigned from the Township.

2. Procedure:

- A. Employee shall provide at least 30 days' notice (unless due to the circumstances this would not be possible) to their Department Head and the Human Resource Department as to their intent to use Parental Paid Leave Time.
- B. Employee must specify in the written notice the total amount of Paid Leave employee plans to take not to exceed four (4) calendar weeks. Parental Paid Leave Time is not subject to extension.
- C. Parental Paid Leave Time will commence immediately upon the birth of the child OR the legal placement of the adoptive child.
- D. Employees must provide proof of the date of the birth or adoption within 30 calendar days of the birth or placement of the child.
- E. If an employee is a parent or adoptive to multiple new children at the same time, (i.e. birth of twins or adoption of two eligible children simultaneously) it shall be considered one event for the purposes of the Parental Paid Leave Time program and will not increase the length of leave for the employee.
- F. For FMLA-eligible employees, the FMLA provides up to 12 weeks of unpaid leave following the birth or adoption of a minor child. Any Parental Paid Time Leave utilized under this policy will run simultaneously with any available FMLA leave for the same qualifying event.
- G. Employees who are eligible and provide timely notice and adequate proof as required under this policy will be approved for Parental Paid Leave time not to exceed 4 calendar weeks,

beginning on the effective date of the event. The Township shall continue to pay the employee at their base rate of pay, including any increases that would normally occur under the covered period. An employee's job remains protected during all period of Parental Paid Leave. Parental Paid Leave must be used consecutively and is not permitted to be used intermittently.

H. If an employee elects to voluntarily return to work prior to the conclusion of the Parental Paid Leave Time period, they will only be paid for the time they took, and will receive no additional Parental Paid Leave Time.

I. The Employee shall remain eligible for all Township benefits and will continue to accrue leave time while on Parental Paid Leave Time, in accordance with their collective bargaining agreement, contract, or letter of understanding or employment.

J. Employees who are on Parental Paid Time Leave are not eligible for overtime pay, as they are not actively working. An employee whose requested Parental Paid Leave Time falls on a scheduled holiday will receive Parental Paid Leave Time pay but will not receive additional holiday pay. Employees are ineligible to work alternative employment during the period of Parental Paid Leave time.

K. It is the responsibility of the Human Resources Department to administer this Parental Paid Leave Time program. It is the responsibility of the Human Resources Department to notify the employee and the Department Head of the employees expected return date based on the approved Parental Paid Leave Time.

L. This policy shall take effect January 1, 2024.



To: Park Commissioners

**From: LuAnn Maisner, Director
Parks and Recreation**

Date: November 30, 2023

Re: Marshall Park Playground Enhancements

Marshall Park, located at 6105 Marsh Road, Haslett, is the first park residents and visitors see when entering our community from the north on Marsh Road. Due to damp soil conditions, park amenities are few and include only a basketball court, small parking lot and a 27-year-old play structure.

A new park identification sign will be installed in Spring of 2024, which will bring greater awareness to this space. Based on evaluation of the existing playground, this play structure is overdue for replacement. This park not only serves nearby neighbors, but the parking lot also welcomes visitors from greater distances.

Based on information received during a recent Township Board listening session in Haslett, the Board discussed a possible opportunity to work with the Park Commission to fund a replacement play structure in 2024 from the General Fund.

At the November 14, 2023 Park Commission Regular Meeting, the Park Commission unanimously approved a motion to work collaboratively with the Township Board to replace the playground in Marshall Park in the Spring of 2024, with an estimated General Fund request of \$150,000.

Marshall Park was acquired in 1974 and named in honor of the Marshall Brothers, the first settlers in Meridian Township in 1836. The playground was added in 1996. Its replacement is indeed in the Capital Improvement Plan, but not until 2026.

Motion for Township Board Consideration:

MOVE TO APPROVE FUNDING IN THE AMOUNT OF \$150,000 FROM THE GENERAL FUND TO SUPPORT A NEW PLAY STRUCTURE IN MARSHALL PARK, LOCATED AT 6105 MARSH ROAD, HASLETT, FOR INSTALLATION IN THE SPRING OF 2024.



To: Board Members
From: Frank L. Walsh, Township Manager
Date: December 1, 2023
Re: Meridian Township Public Safety Recruitment & Retention Program

As you are aware, from our previous discussions, we are struggling to recruit and retain our public safety personnel. The issue is not just a Meridian Township issue. The lack of qualified police officers, and paramedics, is reaching a crisis level across the country. While our fire department is near capacity, our police department is down approximately 25% in the number of officers we need to safely protect Meridian residents.

Over the past two years, retired Police Chief Plaga, Police Chief Grillo, Fire Chief Hamel, Human Resources Director Tithof and I have been consumed with how do we bolster the number of public safety team members. While we have made strides, there have been setbacks. Together, over the past three months, we have zeroed in on a pragmatic approach that we believe will take our departments to the next level in regards to proper staffing. While we understand the newly crafted Public Safety Recruitment and Retention Program is costly, we believe the program will achieve our overarching goal of protecting the citizens of Meridian Township. I do confess, the program is so costly that it may require us to reallocate or reassign some of our long term projects. I've pored over the numbers. I strongly believe that with a little belt tightening, we can easily absorb the cost of the program. Most importantly, given the daily responsibilities of our paramedic/firefighters and police officers, this is the right step for our community.

The program is built on two components. First, we will expand our recruitment bonus program as outlined by Chief Grillo and Chief Hamel. In addition, effective January 1, 2024, the program will increase wages for all uniformed public safety team members by 13%. The one year adjustment, including overtime and holiday pay, is approximately \$800,000. The 13% wage increase does not include either Chief. If approved by the Township Board, Meridian Township will be in an extremely competitive position with neighboring police and fire departments.

In closing, I want to thank Chief Grillo, Chief Hamel and Director Tithof for their insight over the past few months. I've especially appreciated the positive reinforcement from the Board members. When our team first approached you regarding this issue in October, we sensed and heard the strong support for our public safety team.

Although no action is required for Tuesday evening, our team looks forward to your feedback.



To: Township Board

**From: LuAnn Maisner, Director
Parks and Recreation**

Date: November 17, 2023

Re: Memorandum of Understanding-Okemos Public Schools

The Meridian Township Parks and Recreation Department has had a good working relationship with Okemos Public Schools in the past, but as Meridian Township approaches new leadership in the Parks and Recreation Department, there is great value in having a written agreement to confirm and clarify our relationship.

Manager Walsh and I recently met with Superintendent Hood and his Community Ed representative to discuss past and current practices with regards to field maintenance and field scheduling. Meridian Township utilizes multiple outdoor field spaces for youth sports programs throughout the year. In the past, Okemos Schools have charged Meridian Township a fee for field usage even though we provide field preparation, bases, porta potties, and many of the goals that are located at the schools. Conversely, the school occasionally utilizes park facilities at no charge. The purpose of this MOU is to clarify fees and priorities in field scheduling.

DRAFT

MEMORANDUM OF UNDERSTANDING Between Okemos Schools and Meridian Township
This Memorandum of Understanding (hereinafter referred to as "MOU") is entered into between Okemos Schools (hereinafter referred to as "Okemos") and Meridian Township (hereinafter referred to as "Township") on this ____ day of _____, 20____.

WHEREAS, Okemos Schools and Meridian Township are committed to providing high-quality recreational programs for the youth of Okemos; and WHEREAS, Meridian Township Parks and Recreation Department operates various youth sports programs, including soccer, flag football, baseball, and softball; and WHEREAS, Okemos Schools and Meridian Township recognize the mutual benefits of collaboration in utilizing the available facilities for practices and games; NOW,

THEREFORE, Okemos Schools and Meridian Township agree to the following terms and conditions:

1. Utilization of Facilities:

- a. Meridian Township Parks and Recreation Department operates recreation youth soccer, flag football, baseball, softball, and other programs that directly and positively impacts Okemos School students. The Okemos School District operates student and community programs that positively impact Meridian Township residents.
- b. The Township and District may utilize a combination of Okemos Schools facilities and Meridian Township facilities for practices and games. No fees will be charged with the exception of the fees indicated below.
- c. The Township and district are responsible for supervision and oversight of those participating in or attending events with use of facilities.
- d. Special events beyond the normal scope of use (practices, games, field trips, one time meetings/events) outlined in this memorandum, shall be reviewed on a case by case basis by both parties to see if they call outside the scope of the agreement where reasonable fees may be charged.

2. Field Preparation and Maintenance:

- a. Meridian Township and District shall be responsible for lining the fields and preparing the ball fields (dragging and chalking) required for the operation of its programs, regardless of ownership of the site.
- b. The Township and District shall ensure that the fields are maintained in good condition throughout the duration of the programs, required for the operation of its programs, regardless of ownership of the site.
- c. The Township and District shall provide any non-fixed equipment necessary for the sporting or recreation event to occur, required for the operation of its programs, regardless of ownership of the site.
- d. Damages beyond normal wear and tear to sites known to be caused by an event under supervision of the Township or District may be charged to the corresponding party to return the area to its prior condition for use.

3. Scheduling and Coordination:

- a. Okemos Schools and Meridian Township shall work collaboratively to establish a schedule for the utilization of the facilities.
- b. Both parties shall make reasonable efforts to accommodate each other's needs and minimize scheduling conflicts.
- c. Meridian Township and Okemos District activities shall have priority in utilization of their own respective premises in the event that a conflict occurs, and priority over other entities.
- d. An annual planning meeting between the Township and District shall occur to develop a three-year, ongoing calendar to coordinate events for community education, athletics and Meridian Parks and recreation and use of corresponding fields or parks.

4. Fee Schedule

- a. The Township and District will not charge each other for custodial/ground coverage of the respective area where the event occurs at a time normal operations of the site are expected. (Weekdays)
- b. The Township and District may charge each other a custodial/grounds coverage of the respective area where the event occurs at a time when normal operations of the site are not expected. (Weekends, Holidays)

~~*NOTE: Meridian Township does not currently utilize indoor facilities in Okemos Schools.~~

5. Meridian Police Partnership

- a. Meridian Township will provide access to a school liaison officer to assist the Okemos Schools in safety related matters that may impact the district or community.

6. Meridian Senior Center Partnership

- a. Meridian Township and the Okemos Schools collectively value our senior citizens and will work collaboratively to provide a location that provides opportunities for socialization, recreation, health and wellness.
- B. Meridian Township and the Okemos Schools will craft an additional memorandum of understanding in regards to future plans for the Meridian Senior Center.

7. Liability and Insurance:

- a. Each party shall be responsible for maintaining appropriate liability insurance coverage for its respective programs and activities.
- b. Okemos Schools and Meridian Township shall indemnify and hold each other harmless from any claims, damages, or liabilities arising out of their respective activities under this MOU, to the extent permitted by law.

8. Term and Termination:

a. This MOU shall commence on the date first written above and shall remain in effect until terminated by either party upon thirty (30) days' written notice to the other party.

9. Amendments:

Any amendments or modifications to this MOU shall be in writing and signed by both parties.

10. Governing Law:

This MOU shall be governed by and construed in accordance with the laws of the state of [State], without regard to its conflict of laws principles. IN WITNESS WHEREOF, the undersigned, duly authorized representatives of Okemos Schools and Meridian Township, have executed this Memorandum of Understanding as of the day and year first above written.

[Okemos Schools Representative]

Title: _____

[Meridian Township Representative]

Title: _____



To: Board Members

**From: Dan Opsommer, Deputy Township Manager
Director of Public Works and Engineering**

Date: December 5, 2023

**Re: Letter of Agreement between the Charter Township of Meridian and the
Department of Public Works and the Department of Parks and Recreation
Technical, Professional and Officeworkers Association of Michigan (TPOAM)**

For the Board's knowledge, this letter of agreement (LOA) was developed in partnership with the Union and they are supportive of the LOA. We are proposing this LOA to address two issues:

1. There is a stipend in the current union contract that is a carryover from prior union contracts. This stipend is not producing value for our employees and residents, which is why we would like to repurpose it to meet a need we currently do have.

Today, every union employee in this bargaining unit is eligible to receive a \$250 annual stipend if they complete the required training to receive a NASSCO Pipeline Assessment Certification program license. The training for this license is conducted every three years.

The Township pays approximately \$18,000 every three years for our employees to take this training, \$6,000 on average per year. We would save approximately \$4,500 per year as the vector training would only be about \$1,500 per year for all of the utility workers.

The purpose of the NASSCO training is to be able to grade pipe, and we only need 1-3 employees to be able to grade pipe. Therefore, our employees and residents are not receiving value from the current stipend as it is currently structured.

We are proposing to convert this \$250 stipend so that it does produce value for our employees and residents. We need every utility worker to know how to operate and perform general preventative maintenance on both Township-owned vectors. Some utility workers who don't work with the vectors very frequently in their day-to-day responsibilities (generally those not in the Water and Sewer Departments) are still learning how to operate and perform general preventative maintenance on them. The two vectors are not identical, so there are differences between the two in terms of operation and maintenance.

Under the LOA, this stipend would be converted to be for completing training and knowing how to operate and perform general preventative maintenance for all Township-owned vectors. By converting this stipend, we will save about \$13,500 every three years, and we will be able to get every utility worker fully trained on how to operate and perform general preventative maintenance on both vectors.

Memo to Township Board

December 5, 2023

Re: Letter of Agreement between the Charter Township of Meridian and the Department of Public Works and the Department of Parks and Recreation Technical, Professional and Officeworkers Association of Michigan (TPOAM)

This will then help us with any and all work, including emergency responses, that the vactors are used for. For certain projects, such as excavation for a new sign post, it will make this project much easier as using the vactor for this project reduces wear and tear on the body.

2. The LOA would also modify the schedule for standby call duty. In the most recent union contract, we added language outlining the new procedure we had been using for utility workers to sign up for standby call duty.

The Township must have a utility worker serving on standby call duty at all times in order to properly respond to emergencies 24 hours a day, 365 days a year.

The new language we added in the contract requires the signup to be conducted bi-annually.

The Union has requested the ability to do quarterly signups. The Union believes it will be easier to get employees to sign up for standby duty as they won't have to schedule their lives (vacations, medical appointments, etc.) so far in advance.

Management does not have an issue with doing the signup on a quarterly basis. However, the union contract does not currently allow for this. Therefore, this proposed change to the union contract is required in order to be able to do this.

Attachments:

1. Letter of Agreement between the Charter Township of Meridian and the Department of Public Works and the Department of Parks and Recreation Technical, Professional and Officeworkers Association of Michigan (TPOAM) with an effective date of December 13, 2023.
2. 2023-2027 Union Contract between the Charter Township of Meridian and the Department of Public Works and the Department of Parks and Recreation Technical, Professional and Officeworkers Association of Michigan (TPOAM)

**LETTER OF AGREEMENT
BETWEEN
THE CHARTER TOWNSHIP OF MERIDIAN AND
THE DEPARTMENT OF PUBLIC WORKS AND DEPARTMENT OF PARKS AND RECREATION EMPLOYEES
(TPOAM)**

Meridian Charter Township (Employer) and the Technical, Professional and Officeworkers Association of Michigan representing the Department of Public Works and Department of Parks and Recreation Employees (Union), who are parties to a collective bargaining agreement (collectively “Parties”) that expires December 31, 2027, enter willingly into the following Letter of Agreement:

A. Amend Article 34, Section E. 1. and 2., regarding Standby Call Duty, to read as follows:

1. *Quarterly On-Call Schedule.* Standby duty will be scheduled quarterly as follows: January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31.
2. *Voluntary Selection Process.* Employees select standby call duty shift each round by seniority, beginning with the most senior employee. The Union may open the on-call voluntary signup for two or more rounds. If five rounds are held, members could sign up for up to five on-call shifts. Sign-up must be completed, meaning all weeks are filled, no later than:

Sign-Up Completed By	For the following Quarter
December 15	January 1 through March 31
March 15	April 1 through June 30
June 15	July 1 through September 30
September 15	October 1 through December 31

B. Amend Article 48, Section D, regarding Licenses and Certifications, to read as follows:

- D. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive an annual \$250 stipend for the ability to operate and perform general preventative maintenance for all Meridian Township-owned vectors. The Township shall provide training for operation and performing general preventative maintenance for all Meridian Township-owned vectors.

C. Termination. The Parties agree that this Letter of Agreement expires December 31, 2027, unless otherwise mutually agreed.

AGREED.

CHARTER TOWNSHIP OF MERIDIAN

TPOAM

By: Patricia Herring Jackson
Township Supervisor

By: Larry Bobb
Local President

By: Deborah Guthrie
Township Clerk

By: Jonathan Pignataro
TPOAM Business Agent



AGREEMENT

By and Between

THE CHARTER TOWNSHIP OF MERIDIAN

and the

DEPARTMENT OF PUBLIC WORKS AND DEPARTMENT OF PARKS AND RECREATION

TECHNICAL, PROFESSIONAL AND OFFICEWORKERS ASSOCIATION OF

MICHIGAN (TPOAM)

Effective Date: January 1, 2023

Termination Date: December 31, 2027

Providing a safe and welcoming, sustainable, prime community.



A PRIME COMMUNITY
meridian.mi.us

Table of Contents

AGREEMENT	4
Article 1. PURPOSE AND INTENT	4
Article 2. RECOGNITION, EMPLOYEES COVERED	4
Article 3. MANAGEMENT RIGHTS.....	5
Article 4. UNION SECURITY	5
Article 5. UNION REPRESENTATION.....	6
Article 6. SPECIAL CONFERENCES	7
Article 7. GRIEVANCE PROCEDURE.....	7
Article 8. COMPUTATION OF BACK WAGES	9
Article 9. DISCHARGE AND SUSPENSION.....	9
Article 10. SENIORITY, PROBATIONARY EMPLOYEES	9
Article 11. SENIORITY LISTS	10
Article 12. LOSS OF SENIORITY	11
Article 13. LAYOFF PROCEDURE.....	11
Article 14. RECALL PROCEDURE	11
Article 15. BULLETIN BOARDS	11
Article 16. TEMPORARY ASSIGNMENTS	11
Article 17. JOB POSTING AND BIDDING PROCEDURES	12
Article 18. LEAVES OF ABSENCE	13
Article 19. EQUALIZATION OF OVERTIME	13
Article 20. WORK HOURS	14
Article 21. HEALTH INSURANCE	15
Article 22. LIFE INSURANCE.....	16
Article 23. ACCIDENTAL DEATH AND DISMEMBERMENT	16
Article 24. LONG-TERM DISABILITY	16
Article 25. WORKERS' COMPENSATION.....	17
Article 26. SICK LEAVE	17

Article 27. PERSONAL LEAVE	18
Article 28. BEREAVEMENT	19
Article 29. HOLIDAY PROVISIONS.....	19
Article 30. VACATION LEAVE	19
Article 31. JURY DUTY.....	20
Article 32. LONGEVITY	20
Article 33. COMPUTATION OF BENEFITS	21
Article 34. STANDBY CALL DUTY.....	21
Article 35. PENSION PLAN	23
Article 36. SAFETY COMMITTEE.....	23
Article 37. NOTICE OF RESIGNATION AND RETIREMENT	23
Article 38. TEMPORARY EMPLOYEES.....	23
Article 39. SAVE HARMLESS CLAUSE.....	24
Article 40. INTERRUPTION OF WORK	24
Article 41. CLASSIFICATIONS.....	24
Article 42. SUCCESSOR MUNICIPALITY	25
Article 43. WORK RULES	25
Article 44. TOTAL AGREEMENT	25
Article 45. UNIFORMS.....	25
Article 46. TERMINATION AND MODIFICATION.....	26
Article 47. WAGE SCHEDULE	26
Article 48. LICENSES AND CERTIFICATIONS	28

Meridian Township/TPOAM DPW Employees (2023-2027)

AGREEMENT

This Agreement entered into on this 1st day of January 2023, between the Charter Township of Meridian (hereinafter referred to as the "Employer") and the Charter Township of Meridian Department of Public Works and Engineering, Public Works and Physical Plant Employees, affiliated with Technical, Professional and Officeworkers Association of Michigan (TPOAM).

The headings used in this Agreement and exhibits neither add to nor subtract from the meaning, but are for reference only.

Article 1. PURPOSE AND INTENT

The general purpose of this Agreement is to fix basic wages, hours, working conditions, and a method of adjusting disputes and to promote orderly and peaceful labor relations for the mutual interests of the Employer, the Employees, and the Union.

The parties recognize that the interest of the community and the job security of the employees depend upon the Employer's success in establishing a proper service to the community.

To these ends, the Employer and the Union encourage to the fullest degree friendly and cooperative relations between themselves and the employees.

The parties acknowledge the existence of the Local Financial Stability and Choice Act, PA 436 of 2012, as amended ("the Act"), to the extent it remains in effect during the term of the Agreement. The parties understand that an appointed emergency financial manager may reject, modify, or terminate any terms of the agreement as provided by the Act. Such acknowledgement does not constitute a waiver of the Union's right to raise Constitutional and/or other legal challenges (including contractual or administrative challenges) to the validity of: (1) appointment of an Emergency Manager; (2) PA 436 of 2012, as amended; or (3) any action of an Emergency Manager which acts to reject, modify, or terminate the collective bargaining agreement. This section shall immediately become null and void if the Act is stayed, reversed in a referendum, or ruled unconstitutional or reversed in a final decision by the Michigan Supreme Court, the Michigan Court of Appeals, or federal court.

Article 2. RECOGNITION, EMPLOYEES COVERED

Pursuant to and in accordance with all applicable provisions of Act 379 of the Public Acts of 1965, as amended, the Employer does hereby recognize the Union as the exclusive representative for the purpose of collective bargaining in respect to rates of pay, wages, hours of employment, and other conditions of employment for the terms of this Agreement of all employees of the Employer included in the bargaining unit described below:

Unit: All maintenance employees of the Public Works Department, and Parks and Recreation Department, EXCLUDING office clerical employees, casual and temporary employees, professional employees, supervisors, non-supervisory employees and executive employees.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 3. MANAGEMENT RIGHTS

The Union recognizes that the management of the Township, the control of its properties and maintenance of order and efficiency, is solely a responsibility of the Employer. The Union further recognizes that these rights include, but are not limited to the right of the Employer to direct its work force, to make all decisions as to the operation of the Township system and its work force, including but not limited to the increase and/or decrease in the work force, discipline and all other rights normally inherent in the right of management, except as otherwise may be limited by the express terms of this Agreement, and the failure to assert any of these rights shall not be deemed to be a waiver thereof.

It is recognized by the parties that Article 3 reserves and grants to the Township specific rights and prerogatives and is not merely a general reservation of rights. The rights granted to the Township are substantive and intended to be fully enforced by the parties. They are not a mere recital.

Article 4. UNION SECURITY

The Township agrees to deduct from the salary of each individual employee in the bargaining unit who voluntarily becomes a member, subject to the provisions of PA 349 of 2012, the Union's dues subject to all of the following sub sections:

1. All employees (current or newly hired) may or may not sign a deduction form to join the Union.
2. The Union shall obtain from each of its members a completed deduction form which shall conform to the respective state and federal laws concerning that subject or any interpretations of those laws. The Union will provide the deduction form to newly hired employees within thirty (30) calendar days of their hire date. In order to facilitate this, the Employer will give notice to the Union of all newly hired employees within ten (10) calendar days of their hire date.
3. Deduction forms shall be filed with the Human Resources Director who may return any incomplete or incorrectly completed form to the Union President, and no checkoff shall be made until such deficiency is corrected.
4. The Township shall check off only obligations which come due at the time of check off, will make check off only if the employee has enough pay due to cover such obligation, and will not be responsible for refund to the employee that has duplicated a check off deduction by direct payment to the Union.
5. The Township's remittance will be deemed correct if the Union does not give written notice to the Human Resources Director within two (2) weeks after a remittance is sent, of its belief, with reasons stated therefore, that the remittance is incorrect.
6. The written authorization for Union dues or service fees shall remain in full force and effect during the contract and any successor contract, unless the employee furnishes written notice revoking the authorization.

Meridian Township/TPOAM DPW Employees (2023-2027)

7. The Employer agrees to deduct from the wages of any employee who is a member of the Union a deduction as provided for in a written authorization. Such authorization must be executed by the employee and may be revoked by the employee at any time by giving written notice to both the Employer and the Union. The Employer agrees to remit any deductions made pursuant to this provision promptly to the Union together with an itemized statement showing the name of each employee from whose pay such deductions have been made and the amount deducted during the period covered by the remittance.
8. The Union shall provide at least thirty (30) days' written notice to the Human Resources Director of the amount of Union dues and/or service fee to be deducted from the wages of Township employees. Any change in the amounts determined will also be provided to Human Resources/Payroll at least thirty (30) calendar days prior to its implementation.
9. The Union agrees to defend, indemnify, and save the Township harmless against any and all claims, suits, or other forms of liability arising out of its deduction from an employee's pay of Union dues or representation fee or in reliance on any list, notice, certification or authorization furnished under this Article. The Union assumes full responsibility for the disposition of the deductions so made once they have been sent to the Union.
10. Remittance of dues will be made by the Township to Technical, Professional and Officeworkers Association of Michigan (TPOAM) with original list of contributors and their addresses to be revised on an exception basis.
11. The parties mutually agree to meet and confer if PA 349 of 2012 is found to be invalid, is repealed or superseded in any way in which it becomes legal to establish Union membership or fee payment as a condition of employment.

Article 5. UNION REPRESENTATION

- A. Stewards, Alternate Stewards and Union President. The employees covered by this Agreement will be represented by two (2) stewards as determined by the Union.
 1. The Employer will be notified of the names of the alternate stewards who would serve only in the absence of a regular steward.
 2. The stewards, during their working hours, without loss of time or pay, may investigate and present grievances to the Employer during working hours, provided that the steward notifies his immediate supervisor prior to leaving the job site and upon return.
 3. The Union President shall be allowed the necessary time off during working hours without loss of time or pay to investigate and present grievances to the Employer in accordance with the grievance procedure. The Union President shall notify their Supervisor before and after leaving the job on Union business.
 4. No more than one Steward and one Union representative may investigate or present grievances at a time during work hours.

Meridian Township/TPOAM DPW Employees (2023-2027)

B. Union Bargaining Committee.

1. Employees covered by this Agreement will be represented in negotiations by three (3) negotiating committee members.
2. The employee members of the Bargaining Committee will be paid for the time spent in negotiations in the event they are scheduled to work during a bargaining meeting. The employee shall return to their workstation after negotiations have terminated, provided that there is time left in their normal schedule. The employee shall report to work prior to negotiations in the event that negotiations are to commence subsequent to the start of their normal shift.

Article 6. SPECIAL CONFERENCES

- A. The Employer and the Union may meet twice per year and confer on matters of mutual concern upon written request of either party. The parties may mutually agree to meet more than twice per year. The written request shall be made in advance and shall include an agenda stating the nature of the matter to be discussed and the reasons for requesting the meeting. Discussion shall be limited to matters set forth in the agenda. It is understood that these special meetings shall not require either party to conduct continuing bargaining negotiations nor to in any way modify, add to, or subtract from the provisions of this Agreement.

Meetings, if agreed to be held by the parties, shall be held at a time and place mutually agreeable to the parties. Each party may be represented by at least two (2) persons; however, employees shall be paid while attending a special conference, but only if held during normal work hours. Said meetings may be attended by representatives of the TPOAM and/or local representatives of the Union.

- B. The Union's representative may meet on the Employer's property for one-half (1/2) hour prior to the special conference providing he has properly notified the Township of his presence.

Article 7. GRIEVANCE PROCEDURE

It is the intent of the parties to this Agreement that the grievance procedure set forth herein shall serve as a means for a peaceful settlement of disputes that may arise between them due to an alleged violation of the terms of this Agreement. For the purpose of this Agreement, a grievance is a claim by an employee, a group of employees, or the Union that there has been a violation, misinterpretation, or misapplication of any provision of this Agreement, the personnel policies of the Township that are in conflict with this agreement, or the written work rules of the Department that are in conflict with this Agreement. Any grievance filed in writing shall be signed by the grievant and a Union steward and set forth the facts pertaining to the alleged violation and the remedy desired. If the Employer or Union requests that the aggrieved employee be present at any step or steps of the grievance procedure to participate in the discussion, they will be required to do so.

Employees may consult with the Steward prior to the filing of a grievance and may have representation at any step in the grievance procedure. At each step of the grievance procedure, the Union Steward and the recipient on the Township's behalf shall exchange signed and dated copies of the grievance.

Meridian Township/TPOAM DPW Employees (2023-2027)

Step 1:

Grievances must be presented to the appropriate Superintendent within seven (7) calendar days after the date of their occurrence, or seven (7) calendar days after the grievance has become known, or should reasonably have been known by the employee. After receipt of the written grievance by the respective Superintendent, he/she shall attempt to resolve the issue by responding to the employee and steward within seven (7) calendar days.

Step 2:

If the grievance has not been settled, it shall be presented in writing to the Department Director within seven (7) calendar days after the immediate supervisor's response is due. The Department Director may hear the grievance and shall respond in writing within seven (7) calendar days.

Step 3:

If the grievance still remains unsettled, it shall be presented, in writing, to the Township Manager or Human Resources Director within ten (10) calendar days after the response of the Department Director is due. The Township Manager and Union President shall schedule a meeting within fourteen (14) calendar days to discuss the Union's appeal. The Township Manager shall respond within seven (7) calendar days after the meeting with the Union President.

Step 4:

If the Union is not satisfied with the disposition of the grievance by the Township Manager, the grievance may be submitted to an impartial arbitrator within thirty (30) calendar days of receipt of the decision of the Township Manager. The Union must provide written notice of an intent to arbitrate to the Township.

Upon receipt of notice of intent to arbitrate, the parties shall attempt to agree upon an arbitrator. If the parties are unable to agree upon an arbitrator within ten (10) calendar days of receipt of notice of intent to arbitrate, the Union may request a list of arbitrators from the Federal Mediation and Conciliation Service (FMCS). The Union shall pay any fees related to such request.

Upon mutual agreement of the parties, an arbitrator may hear more than one case at a time.

The parties may mutually agree in writing to use the process and procedure of the American Arbitration Association in lieu of the procedure set forth above.

The arbitrator shall have no power to alter, add to, or subtract from the terms of the Agreement or the written personnel policies of the Board. The jurisdiction of the arbitrator shall be limited to the claimed violation, misinterpretation, or misapplication of the terms of the Agreement, provided, however, that in the event of discipline cases, the jurisdiction of the arbitrator shall be limited solely to the power to determine whether the discipline was for just cause. In the event of discharge cases, the jurisdiction of the arbitrator shall be limited to the question of just cause and the propriety of discharge as a remedy. If the arbitrator determines absence of just cause in a discipline case, he may order reinstatement with back pay or payment to the employee of any contract benefits lost as a result of disciplinary action.

Meridian Township/TPOAM DPW Employees (2023-2027)

The arbitrator's fees and expenses, the filing fee, and the cost of any facilities used for the proceeding shall be borne equally by the parties. The fees of counsel, witnesses, or other parties shall be borne by the party incurring the same.

The decision of the arbitrator shall be final and binding upon both parties.

Article 8. COMPUTATION OF BACK WAGES

No claim for back wages nor any award of an arbitrator under Article 7 shall exceed the amount of regular, straight time wages the employee would otherwise have normally earned.

Article 9. DISCHARGE AND SUSPENSION

- A. The Employer shall not discharge or suspend any employee without just cause. The Employer may, in its reasonable discretion, place an employee on paid administrative leave during an investigation.
- B. Notice of Discharge or Suspension. The Employer agrees, promptly upon the discharge or suspension of a non-probationary employee, to notify, in writing, the employee and their Steward of the discharge or suspension. Said written notice shall contain the specific reasons for the discharge or suspension. A delay in giving notice shall not affect the validity of the Employer's actions if grieved.

The discharged or suspended employee will be allowed to discuss his discharge or suspension with their Steward before they are required to leave the property of the Employer, unless the nature of the discharge warrants immediate removal from the workplace. Upon request, the Employer or their designated representative will discuss the discharge or suspension with the employee and the Steward.

- C. Appeal of Discharge or Suspension. Should the discharged or suspended employee or the Union consider the discharge or suspension to be improper, it shall be submitted to the third step of the grievance procedure.
- D. Use of Past Record. Discipline that is over thirty-six (36) months old shall not be used in imposing subsequent discipline, however, such discipline may be referenced in a grievance proceeding if an employee asserts that they were not aware of a rule or requirement of the Employer or if the employee had previously been disciplined for violation of the same or similar work rule or performance expectation.

Article 10. SENIORITY, PROBATIONARY EMPLOYEES

- A. New employees hiring into the unit shall be probationary employees for the first one hundred twenty (120) work days, or six (6) months, whichever is the longer time period. The employee must work a minimum of one hundred twenty (120) days as a probationary employee. When an employee finishes the probationary period, they shall be entered on the seniority list of the unit and shall rank for seniority from their date of hire. There shall be no seniority among probationary employees. The probationary employee is an employee at will and may be terminated for any reason or for no reason. Upon completion of the probationary period, the employee's name shall be placed on the seniority list as of their last date of hire; provided, however, that if an employee is absent from work

Meridian Township/TPOAM DPW Employees (2023-2027)

due to a layoff or leave of absence of any kind including sick leave, their probationary period shall be extended by a period equal to the duration of such absence.

- B. The Union shall represent probationary employees for the purpose of collective bargaining in respect to rates of pay, wages, hours of employment, and other conditions of employment except discharged and disciplined employees for other than Union activity.
- C. Seniority shall be on a unit-wide basis, in accordance with the employee's last date of hire.
- D. Employees promoted to the position of Lead Worker:
 - 1. Except as otherwise provided in this section, employees promoted to the position of Lead Worker shall serve at least one (1) year promotion probationary period, with wage rates as specified in Article 48, Wage Schedule.
 - 2. Employees promoted to Water Lead Worker and Sewer Lead Worker before January 1, 2023 working to achieving the S-2 certification will not advance to tenured on the wage scale until obtaining the S-2 certification.
 - 3. Employees promoted to Water Lead Worker and Sewer Lead Worker on or after January 1, 2023, shall serve a probationary period until the later of one (1) year or until obtaining an S-2 certification from the State of Michigan. Probationary Water and Sewer Lead Workers shall take a minimum of two exams per year and shall have 36 months to obtain their S-2 certification from the State of Michigan. Probationary Water and Sewer Lead Workers who fail the S-2 licensing exam but obtain a score equal to or greater than ninety percent (90%) of the required minimum passing score, will be afforded one final opportunity to sit for the S-2 licensing exam at the next available exam date, even if the exam date is more than 36 months after their probationary period began.

Failure to successfully obtain a state of Michigan S-2 certification on the timeline outlined in this section will result in the employee being returned to their previous job classification or, if not previously employed by the Township, terminated

- 4. A performance evaluation will be completed during the probationary period.
- 5. Failure to successfully complete the promotion probationary period, as determined by either the Public Works and Engineering Director or the Parks and Recreation Director, will result in the employees being returned to their previous job classification or, if not previously employed by the Township, terminated.

Article 11. SENIORITY LISTS

The Township will maintain seniority lists showing date of hire, name and position of all employees entitled to seniority, and supply the Union President with an up-to-date copy. The Union shall notify the Employer of any errors within thirty (30) calendar days of receiving of the list, or the list shall be deemed conclusive and not subject to change.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 12. LOSS OF SENIORITY

- A. An employee shall lose seniority upon:
 - 1. Voluntary or involuntary termination of employment, unless the involuntary termination of employment is reversed through the grievance procedure.
 - 2. Three consecutive absences without notice or proper use of leave time.
 - 3. Failure to return from leave of absence.
 - 4. Failure to return from layoff.
 - 5. Layoff for a continuous period equal to the shorter of the length of employment or 2 calendar years.
- B. Exceptions to the above may only be made in the Employer's sole discretion. The Employer will provide notice to the Union of any exceptions.

Article 13. LAYOFF PROCEDURE

- A. If the workforce is to be reduced, employees will be laid off in the inverse order of their seniority, (i.e., employees without seniority will be laid off first, then those with the least amount of seniority, and lastly those with the greatest amount of seniority), subject to the abilities of the particular employees to perform the work.
- B. Employees to be laid off will be given seven (7) calendar days' notice of layoff.
- C. The Employer shall not layoff a bargaining unit employee and then hire an additional supervisor.

Article 14. RECALL PROCEDURE

- A. Recall procedure will be according to seniority, subject to the ability of the particular employee to perform the work.
- B. When the bargaining unit working force is increased after a layoff, employees will be recalled according to seniority, with the most senior employee on layoff being recalled first, subject to his ability to perform the work.
- C. Notice of Recall shall be sent to the employee at the last known address on file in the employee's personnel file by certified or registered mail. If an employee fails to report for work within seven (7) calendar days from the date of mailing of Notice of Recall, he/she shall be considered a voluntary quit. Exceptions may be made in the Employer's sole discretion.

Article 15. BULLETIN BOARDS

The Township agrees to provide a bulletin board for use of the Union to post notices at the Service Center. Such facilities must not be used for posting material of a derogatory, improper, or unlawful nature and shall be confined to legitimate Union business. A copy of all material to be posted on the bulletin board must be forwarded to the Human Resources Director prior to posting.

Article 16. TEMPORARY ASSIGNMENTS

- A. Employees required to work in a higher classification within the bargaining unit shall be paid the

Meridian Township/TPOAM DPW Employees (2023-2027)

rate of the higher classification which results in some increase after working in the higher classification for any hours worked. Temporary assignments shall be at the sole discretion of the Employer.

- B. Employees temporarily assigned to positions outside the bargaining unit will be paid at his present rate, plus one-half (1/2) the difference between the rate and the current rate of the position filled, for all hours worked. The decision to make temporary assignments for any length of time will be at the sole discretion of the Employer, who shall make such assignments based on qualifications. When a tie in qualifications for a position to be temporarily filled exists, seniority prevail.

Article 17. JOB POSTING AND BIDDING PROCEDURES

- A. Posting. All vacancies or newly created positions to be filled within the bargaining unit will be posted as described in this article. Job specifications and minimum requirements for vacancies or newly created positions will be posted in a conspicuous place on a bulletin board in the Service Center. A copy of the posting will be provided to the Union President.
- B. Bidding Procedures.
 - 1. Interested employees must apply in writing within the posting period.
 - 2. Non-Utility Worker Position will be posted internally for a period of 7 calendar days and may be posted externally for a length of time to be determined by the Employer.
 - 3. *Utility Worker Round Robin.* The purpose of the Round Robin session is to determine the area of final vacancy.
 - a. Notice of Round Robin session will be posted internally for 7 calendar days.
 - b. Employees may bid on the "home base" using seniority until the final vacancy is determined. In the case of known absences, employees may express their bidding intentions to the Human Resources Director in advance. A bid must include the employee's desire to remain on the job and ability to perform, the total job. Lead workers are eligible to participate in the Round Robin.
 - c. The determined area of final vacancy will then be posted internally for 7 calendar days and may be posted externally for a length of time to be determined by the Employer.
 - 4. At the end of the posting period, the Employer will provide the Union President with a copy of the list of names of those employees who applied for the job.
 - 5. Vacancies or newly created positions will be filled on the basis of qualifications and abilities, except as herein provided. If qualifications and abilities of Lead Worker applicants are equal, total bargaining unit seniority shall be the deciding factor in awarding the promotion.
 - 6. The Employer will notify the Union President as to who was awarded the position and provide notice of denial to employees not selected.
- C. Trial Period. Employees filling vacant or new positions shall serve a trial period of three (3) months or, in the case of Lead Workers, up to one (1) year at the discretion of the Department. The employee shall receive compensation for the position at the step that results in a pay increase during the trial period. In the Employer's sole discretion, during the trial period, the employee may revert back to their former classification at their own initiative, or be required

Meridian Township/TPOAM DPW Employees (2023-2027)

to do so by the Employer. Employees returned to the former classification are ineligible for promotion for at least nine (9) months after the date of return to the former position.

Article 18. LEAVES OF ABSENCE

- A. On written request to and approval of the Department Director, an employee may be granted an unpaid leave of absence for periods not to exceed one (1) year without loss of seniority.

Leaves of absence related to illness or other medical circumstances must be certified by a physician. Any leave may be extended for like cause.

- B. Employees shall accrue seniority while on any leave of absence granted by the provisions of this Agreement, and shall be returned to the same or comparable position they held at the time the leave of absence was granted.
- C. One (1) member of the Union selected to attend a function of the Union shall be allowed time off, without pay, to attend.
- D. Leave of absence shall be limited to one (1) per calendar year (January through December), for any reason. If there is not reasonable prospect of an employee returning from any leave of absence, he/she will be terminated.
- E. Also see Article 26(G) Family and Medical Leave.

Article 19. EQUALIZATION OF OVERTIME

- A. Planned overtime hours shall be divided equally as possible among employees within each classification in their section. An up-to-date list showing overtime hours will be posted in a prominent place on each bulletin board.
- B. Whenever planned overtime is required, the person who has the ability to do the work and with the least number of overtime hours in that classification in their section will be called first and so on down the list in an attempt to equalize the overtime hours.
- C. For purposes of this clause, time not worked because the employee was unavailable or did not choose to work will be charged the average number of overtime hours of the employees working during that call-out period.
- D. Overtime hours will be computed from January 1st through December 31st of each year. Excess overtime hours will be carried over each year and is subject to review at the end of each period.
- E. If an error is made by the Employer in applying the provisions of this Article, the error will be corrected by awarding an employee the next available overtime offered.
- F. Unforeseen overtime will be needed from time to time. Should it be necessary, work will be assigned by the following procedure:
 - 1.) Job continuation;
 - 2.) Within the section affected;

Meridian Township/TPOAM DPW Employees (2023-2027)

- 3.) Outside of the section by assigning the least senior employee(s) who are qualified to do the work.

The employee(s) shall work such reasonable overtime hours, as determined by the Township. The Department Director or his/her designee shall have the discretion to approve an excused absence from the assigned overtime hours. Such approval shall not be unreasonably withheld. Overtime work is voluntary under normal conditions.

- G. The Township will provide notice of unfilled overtime opportunities via email, workplace posting, or any other reasonable means of communication. If the opportunity is not filled seventy-two (72) hours before the start of the opportunity, the Township may assign qualified temporary employees to fill the overtime. If no qualified temporary employees are available, the Township shall assign bargaining unit employees to fill the overtime in reverse order of seniority.

H. Snow Removal Overtime

1. All interested DPW employees who have the ability to do the work will be given an opportunity to sign up for the snow removal call list.
2. The list of those interested will be arranged by seniority and the most senior employee will be given the first opportunity to come in for snow OT, then the next senior, and so on. No one will be called in a second time until all those interested have been given a chance to come in. Any call to an employee for snow OT shall only be to the telephone number on file with the DPW Superintendent. If no answer is received, the next senior employee will be called.
3. The rotation through the list shall be by "event" not by number of hours. On each event (defined as a management decision to offer snow removal work as OT), the employees on the snow removal list will be called until sufficient employees have agreed to report. When the next event occurs, call in will start with the next employee who was not called for the previous event, without regard to the hours worked previously or anticipated.
4. The snow removal OT list will be kept separately and will not count towards regular OT as is handled under Article 19.
5. The snow OT rotation list, with current hours, will be posted in a conspicuous location.
6. Errors in call in shall be adjusted by correcting the list for the next call in. No back pay shall be awarded for any error in call in.

Article 20. WORK HOURS

A. Work Hours.

1. Lead Utility Workers are 7:30am - 3:30pm (three 15 minute paid breaks retained)
2. Utility Workers, Lead Mechanic, and Mechanic are 8:00am - 4:00pm (three 15 minute paid breaks retained)

Meridian Township/TPOAM DPW Employees (2023-2027)

3. If the Township elects to open any Utility Workers, Lead Mechanic, or Mechanic positions to the 7:30am - 3:30pm schedule for operational purposes, employees will be offered the opportunity based on classification and seniority.
- B. Overtime - Time and one-half will be paid as follows:
 1. For all hours worked over forty (40) in one week. Hours worked includes paid leave time.
 2. For all hours worked on holidays that are defined in this Agreement in addition to holiday pay.
 - C. If the Employer should change the work/week work day to, by way of illustration but not limitation, four (4), ten (10) hour days, paragraph B (1) above will apply.
 - D. For purposes of computation of overtime, the work week shall be Saturday through the following Friday.
 - E. Employees may not accumulate more than forty (40) hours of time off in lieu of pay (compensatory time) for overtime work at any point in time.
 - F. Compensatory time off shall be approved in advance by the Department Director or his/her representative. Except for emergencies, compensatory time off shall be scheduled at least forty-eight (48) hours in advance.

Article 21. HEALTH INSURANCE

- A. The Employer shall provide each employee and eligible dependents with health insurance coverage selected through the Healthcare Coalition. The Union agrees to participate in a Healthcare Coalition involving an authorized representative from TPOAM and other Township employee groups to discuss and evaluate insurance options. The unit is subject to Public Act 152 of 2011 which shall limit the Employer contribution for all medical insurance expenses as described in PA 152.
- B. Subject to the selection of coverages by the Healthcare Coalition, the terms of any such coverage and the provisions of PA 152, the Employer shall deposit, if any, an annual Health Savings Account (HSA) contribution into each employee's Health Savings Account (HSA) in one installment that will be made in January, and will cover January through December.
- C. The Township reserves the right to substitute another carrier or plan of this coverage; the fundamental provision of the present coverage will not be changed.
- D. An employee who has dual medical insurance coverage may, at their option, elect to refuse medical insurance coverage provided by the Township. Such election shall be in writing. The Township shall pay any employee entitled to and refusing medical insurance coverage an amount equal to the current single monthly premium rate for each month not to exceed \$375 per month in which medical insurance coverage is not provided.
- E. Employer agrees to provide dental insurance, subject to the applicable eligibility requirements of the policy.

Meridian Township/TPOAM DPW Employees (2023-2027)

- F. Employer agrees to provide vision insurance, subject to the applicable eligibility requirements of the policy.
- G. Employees whose spouse is also employed by the Township may only be covered under one contract and are not eligible to receive health insurance opt out payment.
- H. Retiree Health Insurance.
 - 1. Employees hired prior to 1981 who have at least twenty years of service and who have reached the age of 55, the Township will pay one-half of the two-person rate (Not to exceed \$4,000.00 annually) or one-half the single subscriber rate (Not to exceed \$2,000.00 annually, whichever is appropriate. Health insurance program same as active employees. Surviving spouse can receive one-half single subscriber paid premium not to exceed \$2,000.00 annually. If surviving spouse remarries, health insurance is discontinued. An Employee who leaves the employment of the Township and has twenty years of service may not have this benefit extended to them until they have reached the age of 55.
 - 2. For all other employees hired after May 1981, the employer agrees to institute the Mission Square VantageCare Program. The Township agrees to contribute 2% of the employee's base pay to be matched by employee's 1% pre-tax contribution. Unused sick leave must be contributed, as specified in Article 26 Sick Leave, Section E, as an employee match, upon separation or retirement.

Article 22. LIFE INSURANCE

The Township shall provide each employee with term group life insurance coverage. Employees shall be insured in an amount equal to the employee's salary to the next multiple of \$1,000, but not less than \$10,000. The entire cost of this insurance shall be borne by the Township. The coverage provided shall be subject to the terms of the policy, which shall control in all respects, including but not limited to reduction of benefit due to age and expiration of benefit upon retirement.

Article 23. ACCIDENTAL DEATH AND DISMEMBERMENT

The Township shall provide each employee with insurance coverage against accidental death or dismemberment, wherever or however it occurs, which shall be in addition to benefits provided by workers' compensation and other insurance programs listed herein. The coverage afforded shall be in an amount equal to the employee's salary to the next multiple of \$1,000 but not less than \$10,000. The coverage provided shall be subject to the terms of the policy, which shall control in all respects.

Article 24. LONG-TERM DISABILITY

Employees will be eligible for long-term disability coverage pursuant to the Township's policy, subject to the terms of that coverage.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 25. WORKERS' COMPENSATION

- A. An employee who received compensation under the Workers' Compensation Insurance, as provided by the Township, may receive at the employee's option only that portion of their regular salary which will, together with such compensation equal their regular take home salary. In cases of this nature, an amount equal to the difference paid by the Township between an employee's workers' compensation and their regular take home salary shall be deducted from the employee's accumulated sick leave. Under no circumstances will the combination of workers' compensation and Township payment as spelled out above exceed the employee's normal base pay. When the amount of the employee's accumulated sick leave has been depleted, the Township will no longer pay the difference between the employee's salary and workers' compensation. The employee is responsible to use sick leave until workers' compensation begins. The employee's sick leave used during this period, if any, will be reinstated when workers' compensation begins. An employee will continue to accrue and receive benefits for the first thirty (30) days while on workers' compensation. When this period has elapsed, they shall be deemed to be on inactive status and will not be eligible to accrue or receive benefits other than those stipulated in this section. Medical insurance will continue for the first 180 days of leave. This does not include payment in lieu of medical insurance. However, if the employee received the 'opt out' payment at the time leave commences and loses insurance coverage through a spouse during leave, they may enroll into the Township's insurance plan and coverage will be maintained by the employer through the first 180 days of leave. The employee must make arrangements to continue paying their health insurance premium cost-sharing amounts.
- B. Simultaneous payment with workers' compensation shall not be paid for injuries received because of negligence on the part of the employee injured. In case of failure of an employee to report within 24 hours any injury sustained by them, it shall be presumed such injury resulted from their own negligence. All cases where negligence on the part of the employee is determined or presumed by the Department Director or Township Manager, may be appealed to the third step of the grievance procedure.

Article 26. SICK LEAVE

- A. Sick leave is defined as absence from duty because of illness, injury, or quarantine resulting from exposure to contagious disease, provided that said injury or illness is not covered entirely by the Michigan Workers' Compensation Act. Employees may use sick leave in accordance with the eligibility criteria of Sections 4 (1) (a-d) of the Michigan Paid Medical Leave Act (Public Act 338 of 2018, as amended). In addition to the above, notwithstanding whether the family member that normally resides in the employee's household, sick leave shall be approved by the Department Director for employees to attend to the needs of and/or visit family members who are gravely ill. For the purpose of this section, "family members" shall include father, mother, sister, brother, grandfather, grandmother, grandchild, and children.
- B. To be eligible for sick leave, the employee must properly notify their immediate supervisor or Department Director that they will not report for work prior to the beginning of their shift. All notice should be given as soon as possible to allow the departments involved enough time to make the necessary adjustments.

Meridian Township/TPOAM DPW Employees (2023-2027)

- C. The Township may require such substantiation of sick leave as they deem necessary, including a certificate of a physician duly licensed to practice medicine in the State of Michigan or, in a case involving prolonged or repeated absence, an examination by a physician duly appointed by the Township to perform such examination. If such examination is required, the Township will pay the cost.
- D. Sick leave benefits will be earned at a rate of one (1) day per each calendar month worked and can be accumulated up to a total of 880 hours. Each new employee shall be credited with an advance of 80 hours for sick leave purposes when accepting a position with the Township on a full-time basis (permanent). After they have actually earned 80 hours, they will be credited with 8 hours on the first day of each calendar month.
- E. For those employees hired since May 1981, $\frac{1}{4}$ of the employee's accumulated sick leave will be contributed to their Mission Square Vantage Care account provided proper notice is given to the Township under Article 37. If a retiring employee satisfies the retirement notice requirements of Article 37, $\frac{1}{2}$ of his/her accumulated sick leave will be contributed to the employee's Mission Square Vantage Care account. The employee must give proper notice of separation under Article 37 to receive normal separation benefits, and, must not abuse sick leave during the final two (2) weeks of their employment. Employees who are discharged, are not eligible for the benefits under this section.
- F. An employee who is absent from work due to personal illness the day before or the day after a regular holiday recognized by this Agreement or scheduled vacation may, be required, to present a doctor's verification of illness before they will be permitted to return to work.
- G. The parties agree that FMLA leave entitlement will be governed by the FMLA, as amended, and the Township's personnel policies.

Article 27. PERSONAL LEAVE

- A. Each employee shall be granted a total of 24 hours of personal leave each year with full pay. New hires shall receive pro-rated personal leave at a rate of 2 hours per month on the first month following the date of hire. Personal leave shall not be converted to sick leave or vacation. Personal leave may not be used in conjunction with regularly established vacation periods, unused personal leave shall be forfeited at the end of the calendar year and will not be prorated as a payout on separation of employment.
- B. The personal leave days are made available to provide for pressing personal business which cannot be conveniently scheduled on the employee's off time.
- C. All such leave days shall be approved in advance by the Department Director or their representative. Except for emergencies, personal leave days shall be scheduled at least forty-eight (48) hours in advance.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 28. BEREAVEMENT

- A. In the event of a death in the immediate family, the employee may take bereavement leave of up to three (3) days to attend the funeral and make other necessary arrangements from the date of death until the day after the funeral. Proof of death is required within two (2) weeks to receive paid leave. Leave in excess of three (3) days requires the approval of the Department Director and will be unpaid, unless the employee uses available personal or vacation leave. Any extenuating circumstances for leave other than defined above must be approved in advance by the Department Director. Immediate family is interpreted as including: spouse, child, stepchild, father, mother, sister, brother, step-siblings, father-in-law, mother-in-law, son-in-law, daughter-in-law, grandfather, grandmother, grandchild, stepfather, stepmother, half-brother, half-sister, brother-in-law, sister-in-law, grandmother-in-law, and grandfather-in-law.
- B. One (1) day of bereavement leave, for the day of the funeral only, is allowed in the case of death of an aunt, uncle, nephew, and niece.

Article 29. HOLIDAY PROVISIONS

- A. The following are designated as paid holidays, to be paid at a rate of eight (8) hours straight time:

New Year's Eve	Labor Day
New Year's Day	Veteran's Day
President's Day	Thanksgiving Day
Martin Luther King Day	Day after Thanksgiving
Memorial Day	Christmas Eve
Juneteenth	Christmas Day
Fourth of July	

- B. If a holiday falls on Saturday, employees shall receive the Friday before off. If a holiday falls on Sunday, employees shall receive the Monday following off.
- C. Employees shall receive four (4) hours of holiday pay for Good Friday.
- D. To qualify for Holiday pay, the employee must report for work on his/her regularly scheduled work days immediately preceding and immediately after his/her scheduled holiday, unless he/she is on vacation or is otherwise excused by his/her supervisor, with this exception: that Holiday pay will not apply to the employee who is on an extended leave of absence of one (1) week or more in which the Holiday falls.
- E. Employees whose last day of employment precedes a Holiday in the payroll period will not receive pay for Holidays occurring after the last day worked.

Article 30. VACATION LEAVE

- A. Each full-time employee shall accumulate vacation up to a maximum of two hundred (200) hours. Vacation accumulated beyond this 200 hour maximum will be forfeited if not used within 30 days of

Meridian Township/TPOAM DPW Employees (2023-2027)

exceeding 200 hours. Vacation shall be earned according to the following schedule of continuous and completed years of service:

1 through 4 years	-	96 hours
5 through 9 years	-	120 hours
10 years plus	-	168 hours

- B. Employees cannot use vacation time until they have completed six (6) months of continuous employment.
- C. To the extent possible, individual preferences for vacation leave will be honored. All other factors being equal, seniority shall be the determining factor for vacation leave preference. Employees may request vacation dates between January 1 and April 30, each year. These requests shall be honored on a seniority basis. Vacation dates requested beginning May 1st shall be considered on a first come, first served basis without regard to seniority. Vacation leave shall be subject to the approval of the Department Director and will, insofar as possible, be requested at least two weeks in advance of the requested date. The Department Director has the right, but not the obligation, to give employees time with less than two (2) weeks' notice.
- D. In the event of death, retirement, voluntary quitting, or discharge, the Township will reimburse each person for their earned but unused vacation leave days.

Article 31. JURY DUTY

Full-time non-probationary employees who are called to serve on jury duty during scheduled working hours will be compensated for the difference between the rate of pay for the jury duty and the employee's regular rate for the hours scheduled to work. To be eligible for the above, the employee shall: (a) submit evidence of attendance at jury duty; (b) give the Employer adequate advance notice of the date and time they are to report for jury duty; (c) return to regularly scheduled employment with the Employer when temporarily excused from attendance at court, provided that there is at least one and one-half hours remaining of scheduled work. Probationary employees shall be entitled to non-pay days off for jury duty.

Article 32. LONGEVITY

- A. The Township shall pay longevity according to the following schedule of continuous and completed years of service:

5 through 9 years	-	\$320
10 through 13 years	-	\$640
14 through 17 years	-	\$960
18 years and over	-	\$1,280

- B. Longevity payment shall be earned as of the employee's anniversary date and shall be paid in a lump sum at the first regular pay period following the employee's anniversary date. For purposes of computation, years of service shall be measured from the last date of continuous employment with the Township.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 33. COMPUTATION OF BENEFITS

All hours paid to an employee shall be considered as hours worked for the purpose of computing any of the benefits under this Agreement.

Article 34. STANDBY CALL DUTY

- A. When a qualified employee is on standby call duty, they will receive three hundred dollars (\$300) compensation per week for this responsibility. In addition, when such qualified employee is required to perform any work by the Township when on standby duty, they will be compensated for each hour worked. An additional payment of \$100.00 will be made for on-call duty only during the pay weeks in which the following holidays fall: Memorial Day, July 4, Labor Day, Thanksgiving Day and December 25.
- B. A two (2) hour minimum shall be paid to the employee when actually called out at one and one-half (1½) the employee's straight time rate. The minimum guaranteed hours shall not apply for call outs contiguous to the beginning and end of an employee's normal shift. In such instances, an employee shall receive one and one-half (1 ½) times the regular hourly rate for the exact number of hours or portion thereof worked after the end of their normal shift. In this instance where an employee is called out following the shift, the two hour minimum shift shall apply if there is 1.) a break (time wise) after the regular shift and 2.) an employee is no longer on Township property. There shall be no duplicating or pyramiding of overtime for the same hours worked, and employees shall not be paid twice for the same hours recorded as working hours. The Township has the right to assign employees and the assignments shall be made by ability.
- C. Qualified employees will be determined by the Department of Public Works Superintendent and Director of Public Works. In their absence, the Parks and Recreation Director shall make the determination.
- D. Employees wishing to be qualified shall indicate this desire to the Department of Public Works Superintendent and provision shall be made to make them qualified employees.
- E. Standby Call Duty Procedure.
 - 1. *Bi-Annual On-Call Schedule.* Standby call duty will be scheduled bi-annually January 1 through June 30 and July 1 through December 31.
 - 2. *Voluntary Selection Process.* Employees select standby call duty shift each round by seniority, beginning with the most senior employee. The Union may open the on-call voluntary signup for two or more rounds. If five rounds are held, members could sign up for up to five on-call shifts. Sign-up must be completed, meaning all weeks are filled, no later than December 15 for the schedule beginning January 1 and no later than June 15 for the schedule beginning July 1. Employees can volunteer for as many on-call weeks, including holiday on-call weeks, as the voluntary sign-up process allows.
 - 3. *Trading Standby Call Duty.* Employees may trade shifts freely using the form approved by the Department of Public Works or the Superintendent of Public Works. Completed forms, signed by both employees participating in the trade, must be submitted to the Superintendent of Public

Meridian Township/TPOAM DPW Employees (2023-2027)

Works. If employees trade a shift, and the employee who assumed responsibility for the shift cannot serve for any reason, the shift will be filled by voluntary sign-up. If no employee voluntarily signs up within one week, the shift will be filled using the forced list.

4. *Forced List*

- i. If one or more shifts go unfilled through the voluntary signup process, the Union will assign the least senior member who hasn't served standby call duty. The forced list will start over from least to most senior members once every member has served standby call duty.
- ii. The Union will post and maintain a list of members and the date standby call duty was served on the bulletin board at the Service Center. The Union will post an updated list as soon as time allows and once it has been approved by the Director of Public Works or the Superintendent of Public Works.
- iii. If every member who has not yet served standby call duty has put in for time off the week that a vacancy needs to be filled for standby call duty, or otherwise cannot serve that week, a new forced list will be created and the least senior member will be forced. However, the prior forced list will continue until each member has served, voluntarily or forced.

5. *Definition.* "Served" means that the employee served their duty for an entire on-call week, voluntarily or forced, since July 1, 2021. "Served" does not mean signed up for a shift in the future. "Served" also does not mean the employee signed up for a shift and then traded it before performing duties or was otherwise unable to perform the standby call duties for any reason.

- F. However, if no one in the unit is available for standby call duty, the Director of Public Works or Department of Public Works Superintendent shall assign anyone in the unit, according to ability to perform such duty.

Meridian Charter Township/TPOAM DPW Employees (2023-2027)

Article 35. PENSION PLAN

- A. As of January 1, 2017, the following pension benefit shall apply to current members of the bargaining unit:
 - 1. The multiplier for current participants in the MERS pension system shall be 2.25 for all future service to the Employer.
 - 2. 5% employee contribution through payroll deduction.
 - 3. Final Average Compensation for future years shall only include base wages, overtime, and no more than 240 hours of other compensation at straight time (e.g., vacation and any other compensation).
 - 4. MERS Pension Plan shall be B-3, F55/20 and V-6.
- B. As of January 1, 2017, the following pension benefit shall apply to any new hire or to any employee promoted or transferred into this bargaining unit who was originally hired by the Employer on or after January 1, 2017:
 - 1. The multiplier for new or transferred or promoted participants in the MERS pension system shall be 1.5 for all service to the Employer.
 - 2. 5% employee contribution
 - 3. Final Average Compensation shall only include base wages, overtime, and no more than 240 hours of other compensation at straight time (e.g., vacation and any other compensation).
- C. The Employer shall make an annual contribution in the amount of two hundred and fifty dollars (\$250) to each employee's Mission Square 457 account.

Article 36. SAFETY COMMITTEE

A Safety Committee, consisting of two (2) employees within the bargaining unit and Township representative(s), shall meet as the need arises during regular daytime working hours for the purpose of remedying unsafe working conditions. The Union shall authorize one employee within the bargaining unit to participate in the Township's Safety Committee.

Article 37. NOTICE OF RESIGNATION AND RETIREMENT

Employees must provide at least two (2) weeks' advance written notice of resignation or at least thirty (30) days' advance written notice of retirement to be eligible for separation benefits.

Article 38. TEMPORARY EMPLOYEES

- A. Temporary employees are those employees hired by the Township to assist and supplement bargaining unit employees for up to two hundred ten (210) calendar days. Temporary employment may be extended for up to sixty (60) additional days with the mutual consent of the Employer and the Union.
- B. If a temporary employee is retained on permanent employment, the time spent as temporary shall count towards the probationary period and the employee will be covered by the terms and provisions of this Agreement. Seniority shall date from the employee's date of hire as a temporary.
- C. It is understood that temporary employees are not to replace or displace regular employees.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 39. SAVE HARMLESS CLAUSE

Should any provision or section or portion thereof, of this contract be held by a court of competent jurisdiction to be invalid, illegal, or unconstitutional, such holding shall not be construed as affecting the validity of this contract as a whole or of any remaining portion. Upon the issuance of such a decision, the parties agree, immediately, to negotiate a substitute for the invalidated article, section or portion thereof. The Union shall indemnify and save the Township harmless against and from any and all claims, demands, suits, or other forms of liability that may arise out of or by reason of action taken by the Township for the purposes of complying with this Agreement or any particular article, section or portion thereof.

Article 40. INTERRUPTION OF WORK

- A. The Union agrees that neither the Union, its agents, nor its members will authorize, instigate, aid, condone, or engage in a work stoppage, slowdown, strike, or other concerted activity which interferes with the operation of the Employer. Individual employees or groups of employees who instigate, aid or engage in a work stoppage, slowdown, or strike may be disciplined up to and including discharge at the sole discretion of the Employer. The Union may grieve on whether or not an actual violation of this section has occurred.
- B. The Employer will not lock out employees during the term of this Agreement.

Article 41. CLASSIFICATIONS

- A. The Employer shall assign employees to one of the five following sections:
 - 1. Sewer Maintenance
 - 2. Water Maintenance
 - 3. Parks and Land Preservation Maintenance
 - 4. Building, Grounds, and Cemetery Maintenance
 - 5. Motor Pool

Each employee's primary assignment will be in one of the above five sections. Current employee's primary assigned section shall be as follows in Appendix A. The Utility Worker job description is per the attached Appendix B. Notwithstanding any contrary provision, the Employer reserves the right to assign employees to any job, location, or section that the Employer believes is necessary and the employee is capable of performing. After the completion of such an assignment, the employee shall return to their "primary section." Supervisors may perform incidental bargaining unit work, but will not be used to erode the bargaining unit. Supervisors will not be entered onto an overtime list.

- B. Classifications.
 - 1. Utility Worker
 - 2. Mechanic

Meridian Township/TPOAM DPW Employees (2023-2027)

3. Lead Worker
4. Lead Mechanic

Article 42. SUCCESSOR MUNICIPALITY

- A. If the Township succeeds to another form of municipal government, or chooses to merge with one or more municipal governments for the providing of service, or contracts with another municipality to provide service, the transformation, merger, consolidation, or transfer which is made shall provide that the success government or authority shall assume all of the terms and conditions of this Agreement. Nothing herein contained, however, shall be construed to prevent the successor to the Township from reducing the work force, laying off employees, or changing job descriptions and duties of employees if economic and efficiency circumstances so dictate, as long as those actions are not inconsistent with the terms of this Agreement.
- B. The parties recognize that the Employer may want to subcontract out custodial and/or transfer station service. The Union agrees to meet in special conference with the Employer under such circumstances.

Article 43. WORK RULES

Changes in existing work rules or new work rules shall be posted for seven (7) calendar days prior to implementation. During this period, the Employer shall meet and confer with the Union, if requested in writing. The seven (7) calendar day period shall not be required in cases of emergency.

Article 44. TOTAL AGREEMENT

The parties agree that all negotiable items have been discussed during the negotiations leading to this Agreement, and they therefore further agree that negotiations will not be reopened on any item, whether contained in this Agreement or not, during the life of this Agreement except as specifically provided for in this Agreement or unless mutually agreed otherwise.

Article 45. UNIFORMS

- A. The Employer shall provide a clothing allowance of seven-hundred fifty dollars (\$750) per year to be paid early as practical in January. The employee must comply with departmental work rules regarding uniforms, including but not limited to, proper outerwear, protective clothing and safety shoes.
- B. Each mechanic will be provided with six (6) sets of uniforms. The mechanics will be subject to the same standards of wearing and accountability as the other employees. The Employer will be responsible for cleaning and maintaining mechanics' uniforms and will have the option of renting or purchasing these uniforms.

Meridian Township/TPOAM DPW Employees (2023-2027)

Article 46. TERMINATION AND MODIFICATION

- A. This Agreement shall be effective as of the first day of January of 2023, and shall remain in full force and effect until December 31, 2027. This Agreement shall be automatically renewed from year-to-year upon its expiration unless either party shall notify the other in writing at least sixty (60) days prior to the expiration of this Agreement, or any extension thereof, that they desire to enter into negotiations for a successor agreement.
- B. Notice under this Article shall be in writing and shall be sufficient if sent by certified mail, addressed to TPOAM at 27056 Joy Road, Redford, MI 48239, and if to the Township, addressed Charter Township of Meridian, 5151 Marsh Road, Okemos, MI 48864, or to any such address as the Union and the Township may make available to each other.

Article 47. WAGE SCHEDULE

<i>Mechanic</i>	2023	2024	2025	2026	2027
Start	\$22.51	\$23.19	\$23.88	\$24.60	\$25.34
1 Year	\$23.67	\$24.38	\$25.11	\$25.86	\$26.64
2 Years	\$24.25	\$24.97	\$25.72	\$26.49	\$27.29
3 Years	\$24.83	\$25.58	\$26.35	\$27.14	\$27.95
4 Years	\$27.71	\$28.54	\$29.39	\$30.28	\$31.18
5 Years	\$29.09	\$30.55	\$32.07	\$33.68	\$35.36
<i>Lead Mechanic</i>	2023	2024	2025	2026	2027
Probationary	\$35.32	\$36.38	\$37.47	\$38.59	\$39.75
Tenured	\$36.68	\$37.78	\$38.91	\$40.08	\$41.28
5-Year Tenured	\$38.51	\$39.67	\$40.86	\$42.08	\$43.35
<i>Utility Worker</i>	2023	2024	2025	2026	2027
Start	\$18.48	\$19.03	\$19.61	\$20.19	\$20.80
1 Year	\$20.78	\$21.40	\$22.04	\$22.70	\$23.38
2 Years	\$21.93	\$22.59	\$23.26	\$23.96	\$24.68
3 Years	\$22.51	\$23.18	\$23.88	\$24.59	\$25.33
4 Years	\$23.08	\$23.77	\$24.49	\$25.22	\$25.98
5 Years	\$24.83	\$25.58	\$26.35	\$27.14	\$27.95
6 Years	\$26.07	\$27.38	\$28.75	\$30.19	\$31.69
<i>Lead Worker</i>	2023	2024	2025	2026	2027
Probationary	\$31.93	\$32.89	\$33.87	\$34.89	\$35.94

Meridian Township/TPOAM DPW Employees (2023-2027)

Tenured	\$33.16	\$34.15	\$35.17	\$36.23	\$37.32
5-Year Tenured	\$34.81	\$35.86	\$36.93	\$38.04	\$39.18

Intent Statement: Effective January 1, 2023, the following will be moved to the new step on the wage scale and receive the additional 5%. All others will progress through the wage scale under the ordinary process, based on years of service.

- Current Mechanics at 4 years on the wage scale
- Current Utility Workers with 5 years on the wage scale
- Current Lead Workers with 5 years consecutive tenured years

A. Shift Premium. The Township may establish assignments that consist of scheduled work hours outside of regularly scheduled shift hours, as referenced in Article 20, Monday through Friday. This “swing shift” position(s) will be first offered to the employees and will be selected on the basis of seniority. Those employee(s) selected to perform this work will be paid 5% shift premium for all hours work outside of the working hours, as referenced in Article 20, Monday through Friday. The Township may return employees to regular shift hours at any time.

In the event no employee within the bargaining unit applies for this assignment(s), the Township may assign this work to a non-bargaining unit employee(s) of the Township at such was as it may determine. The “swing shift” position shall only be permitted during the time in which temporary employees are allowed to work under the Collective Bargaining Agreement.

B. Employee Recognition. To engage employees and improve employee morale, the Township may hold employee recognition activities or events, including but not limited to Employee Appreciation Week picnics and related events, holiday parties, issuance of employee recognition awards and/or payment, such as the Archie Virtue Excellence Award, or raffle additional paid leave or other one-time benefits to employees in conjunction with these recognition events, activities, or awards.

C. The Employer may hire new employees at a higher starting rate when the employee’s experience or, training require a starting rate greater than the minimum considering prevailing market conditions. New employees may not start at a rate higher than the 3rd year step. The Human Resources Director will note in the newly hired employee’s personnel file the reason(s) why the employee started at a rate higher than the minimum and, if requested, provide same to the Union.

D. After-Hours Response Stipend. The Township agrees to pay an after-hours response stipend for certain work performed outside of the hours specified in Article 20. Specifically, the Township will pay each employee a \$40 stipend for each address the employee is directed to report to, and arrives at, to resolve an after-hours matter. The stipend is paid for responding to the address to complete the call, not the number of matters resolved or left unresolved at the address.

- i. If one on-call employee responds to three different calls (at three different addresses) after-hours for leaky water meters, the employee will receive a stipend for each response: \$40 per response for 3 leaky meters, totaling \$120 in compensation.
- ii. If a crew of 4-5 employees must be assembled to respond to an after-hours water main break, each of the crew members who respond will receive a \$40 stipend.

Meridian Township/TPOAM DPW Employees (2023-2027)

- iii. The eligibility for and receipt of this stipend is in addition to any earned standby pay, or overtime compensation, or other payment for licenses, certification, etc., which is provided by the existing collective bargaining agreement.
- iv. The Director of Public Works and the Superintendent of Public Works will maintain a document that employees must use to record their after-hour responses
- v. Employees who are directed to report to and do in fact arrive at multiple addresses are eligible for and will receive multiple stipends. The Parties agree that the following examples reflect the intended calculation of this after-hours stipend

Article 48. LICENSES AND CERTIFICATIONS

A. General Requirements:

- 1. Employees will be paid as early in December each year as is practical for the highest current and valid license or certification they possess. CDL stipends provided in Section F will be paid as early in January each year of the agreement as is practical.
- 2. License or certification stipends are not cumulative within each type of license or certification, except Section C. For example, an employee may not receive compensation for an SI and S2 license described in Section B.
- 3. Payout shall be prorated in the first year of obtaining a license or certification and for newly hired employees with a license or certification upon hire.
- 4. Payouts, not including CDL stipend, will be prorated upon separation of employment.
- 5. The license and certification pay shall not be utilized for any pension-related purposes of calculating FAC or in an employee's contribution to MERS as required by this Agreement.

B. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive on an annual basis a stipend for State of Michigan Drinking Water Operator Certification licenses held according to the following schedule:

SI	\$1,500	S2	\$1,000
S3	\$750	S4	\$500

C. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive an annual \$350 stipend for holding a Michigan Department of Agriculture commercial pesticide applicator license with the category 6 (right-of-way pest management) registration. An additional \$25 per registration, up to \$100, shall be given for the following categories:

- 2. Forest Pest Management
- 3A. Turfgrass Pest Management
- 3B. Ornamental Pest
- 3C. Sewer Line Pest

Meridian Township/TPOAM DPW Employees (2023-2027)

- D. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive an annual \$250 stipend for holding a NASSCO Pipeline Assessment Certification program license.
- E. An employee in either the Mechanic or the Lead Mechanic classification shall be eligible to receive an annual stipend for holding the following State of Michigan certifications:
 - Heavy Duty Truck Mechanic \$1,750
 - Master Automobile Mechanic \$1,250
- F. Each employee shall be eligible to receive a \$1,200 annual stipend for holding a current and valid State of Michigan Commercial Driver's License (CDL) group A with N endorsement.
- G. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive on an annual basis, a \$1,000 stipend for holding a Meridian Township approved backhoe operator safety and training certification.
- H. An employee in either the Utility Worker or the Lead Worker classification shall be eligible to receive on an annual basis, a \$250 stipend for holding a Meridian Township approved street sweeper operator safety and training certification.

IN WITNESS WHEREOF, the parties have executed this Agreement by their duly authorized representatives on this 15th day of February 2023

In the presence of: THE CHARTER TOWNSHIP OF MERIDIAN

[Signature]

By:

[Signature]

Patricia Herring Jackson, Township Supervisor

[Signature]

By:

[Signature]
T. Herring, Township Clerk

In the presence of: TECHNICAL PROFESSIONAL AND OFFICeworkers ASSOCIATION OF MICHIGAN (TPOAM), CHARTER TOWNSHIP OF MERIDIAN DEPARTMENT OF PUBLIC WORKS AND PHYSICAL PLANT EMPLOYEES ASSOCIATION

[Signature]
[Signature]
[Signature]
[Signature]

By:

[Signature] 2-15-23

Larry Bobb, Union President

By:

[Signature] 2-15-23

Mike Ellis, Bargaining Committee

By:

[Signature] 2-15-2023

Tyler Kennell, Bargaining Committee

By:

[Signature] 2-15-23

Jonathan Pignataro, Business Agent